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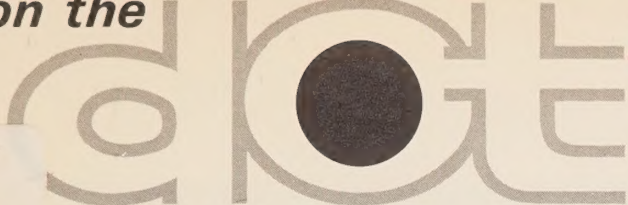
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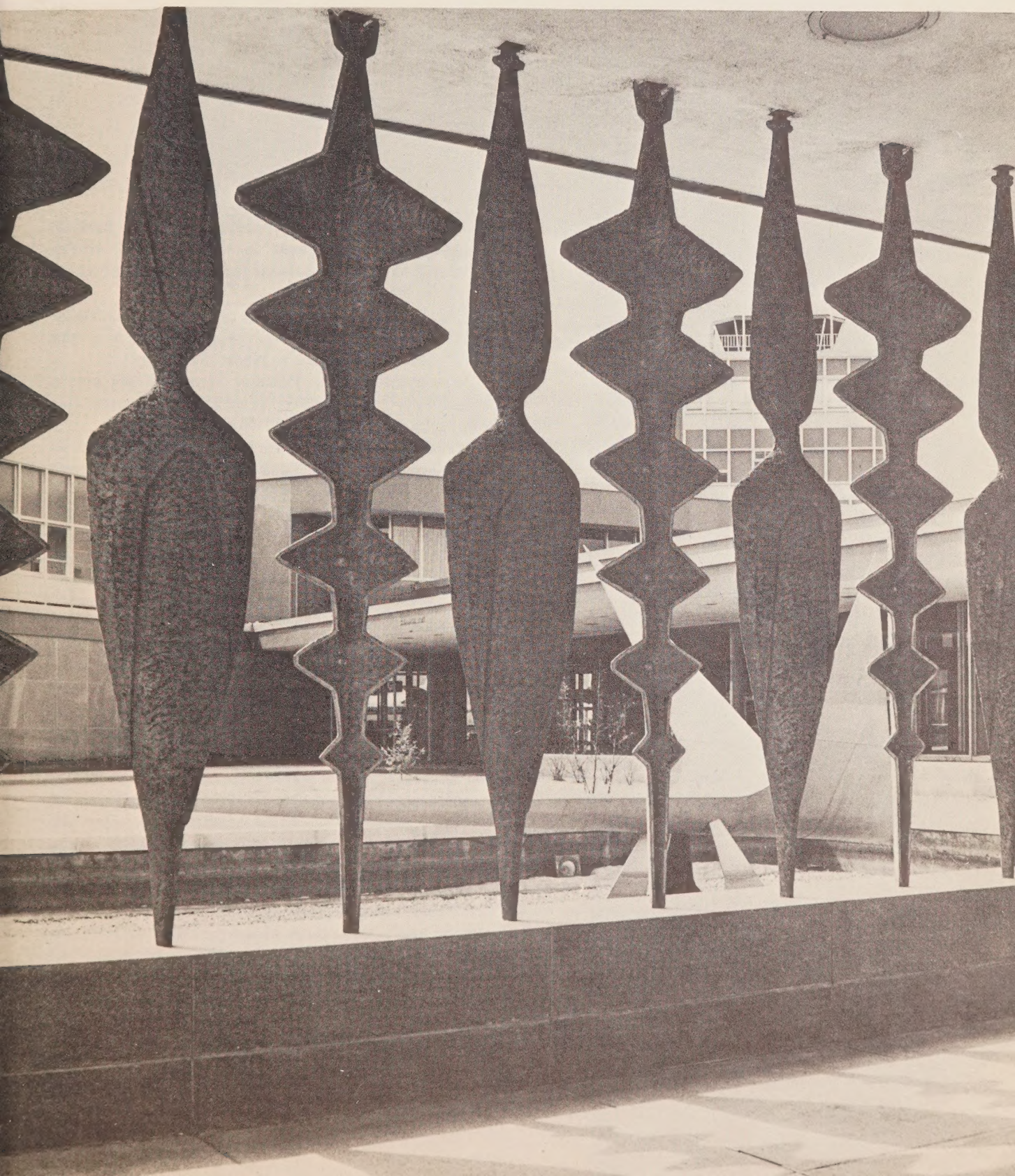
THE BIG LIFT

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January/February 1965

AN EYE TO THE
FUTURE





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COVER

Ottawa International Airport terminal, which houses the department's air services training school (see story page 14). The building is seen through a decorative aluminum screen created by Montreal Sculptor Louis Archambault.

EDITOR

Yvonne McWilliam

NEWS ON THE DOT is a Department of Transport staff magazine published under the authority of the Minister, Hon. J. W. Pickersgill, by the Information Services Division.

In his message on the opposite page Mr. Baldwin suggests that readers write in with ideas for articles or simply to let us know what they like or dislike about News On The DOT.

Two thousand and seven years ago a Greek philosopher (weren't all Greeks philosophers?) said: "It is a very hard undertaking to seek to please everybody".

We suspect that Mr. Publilius Syrus was not only a philosopher but an editor, as well. (With a name like that, if he wasn't he should have been.)

News On The DOT hopes that it pleases most of its readers most of the time and tries to do so by adhering to certain basic ground rules.

Our "raison d'être" is to tell employees about the department's activities in the fields of air, marine, meteorology and telecommunications, and about its policies and plans. We therefore devote our time and effort to feature articles, trying to give fair coverage to all branches.

We try to acknowledge the importance of individuals by using "bylines" (i.e. the name of the person who wrote the article), by illustrating articles with photos of employees on the job and by using as many names as possible. However, with nearly 15,000 employees spread from St. John's, Newfoundland to Whitehorse in the Yukon, we believe items of personnel events such as births, marriages, transfers, sports or social activities would be of little interest other than locally. Also, since the magazine is published once every two months, reporting of these would be untimely.

We depend greatly on readers to provide us with leads for future articles—either about present departmental activities or those of the past. (A relatively untapped wealth of information lies with retired employees.) Too, we are interested in all unusual events which concern individuals, whether or not they are related to their work.

This is your publication—take part in it.

The Editor



FROM THE DEPUTY MINISTER'S DESK

LE MOT DU SOUS-MINISTRE

This is not the first time I have repeated myself, but my increasing pride in the contents and role of our staff publication "News on the DOT" leads me once more to congratulate the members of our Information Services responsible for its production and those of you in the field who contribute to it.

If you feel, as I do, that this magazine is filling a valuable place in staff service, why don't you write and let the editor know? Moreover, if you have suggestions to offer about articles which you would like to see, or field items which you think merit attention and of which we here in Ottawa may be unaware, bring these suggestions along as well. I do this regularly myself.

Ce n'est pas la première fois que je me répète, mais comme je suis toujours de plus en plus fier de notre revue du personnel "News on the DOT", tant au point de vue de son contenu que du rôle qu'elle joue dans notre milieu, je me permets de nouveau de féliciter les membres de nos services d'information qui en assurent la publication ainsi que les employés de nos divers services qui y collaborent.

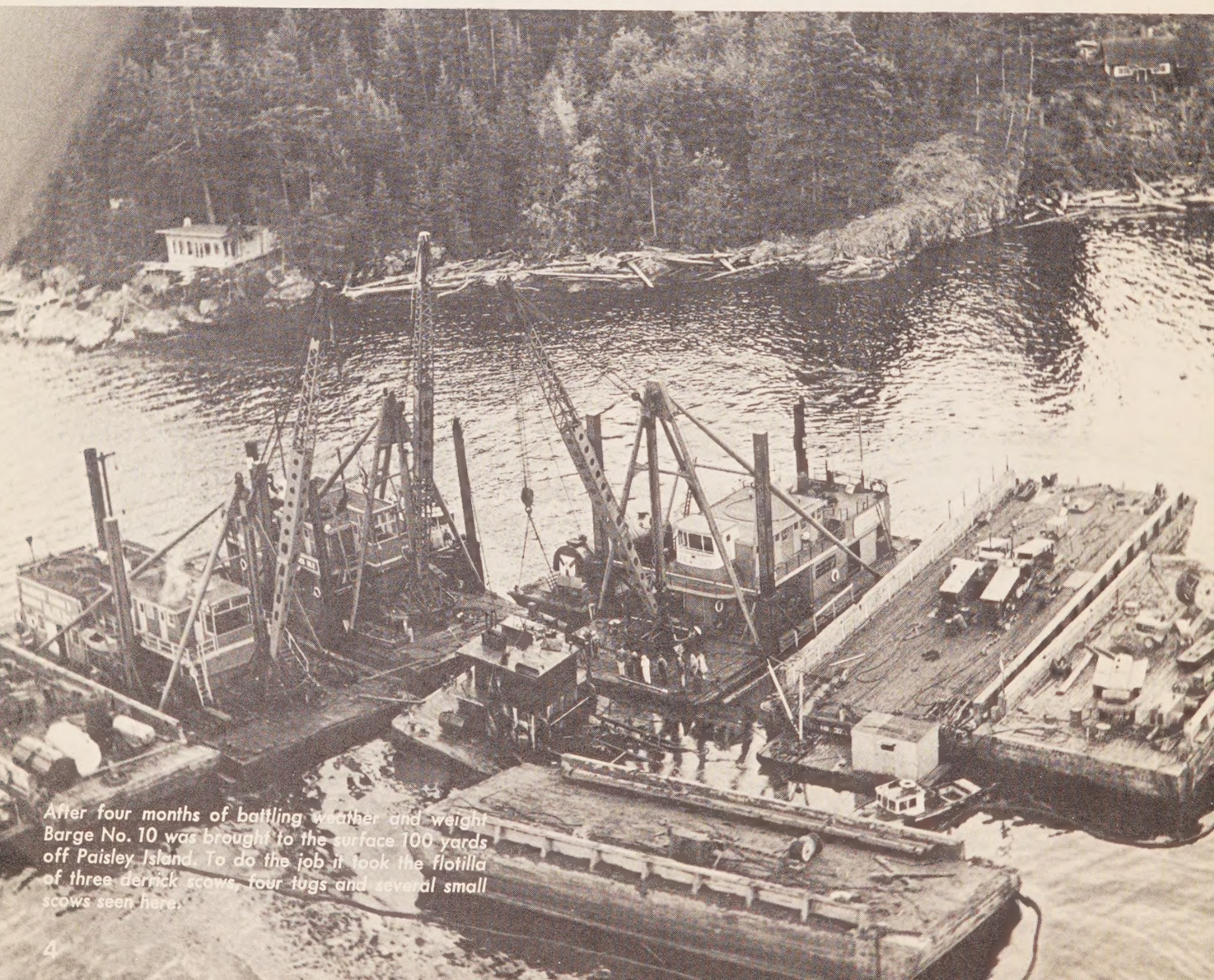
Si vous êtes d'avis, comme moi, que cette revue joue un rôle important au sein du personnel, pourquoi n'en faites-vous pas part au rédacteur? Faites-lui également connaître votre opinion sur le genre d'articles que vous aimeriez y voir paraître ou sur les activités des différentes régions qui méritent d'être connues et dont les fonctionnaires d'Ottawa ne sont peut-être pas au courant. C'est ce que je fais d'ailleurs moi-même régulièrement.

J. R. Baldwin

Oil seeping from a 200-foot barge which sank to the bottom of Howe Sound, B.C. last March fouled 20 miles of coastline, killed wildlife, and hindered industry. How the barge was brought to the surface in the world's deepest salvage operation will go down in D.O.T. history as

the Big Lift

by Yvonne McWilliam



After four months of battling weather and weight Barge No. 10 was brought to the surface 100 yards off Paisley Island. To do the job it took the flotilla of three derrick scows, four tugs and several small scows seen here.



The six divers on the job put in many perilous hours working at man's underwater limit.

Howe Sound, B.C., endowed by nature with beautiful beaches, clean cool water and superb scenery, is known as a vacationer's paradise. For a time last summer, however, its future was in doubt—beaches were covered with black oil, water was slicked down with an oily scum, and birds and fish were dying by the hundreds.

It all started on March 5, 1964, when a barge carrying 9,000 barrels (300,000 gallons) of oil sank in the Sound in more than 250 feet of water. Soon its cargo was bubbling to the surface in globules the size of tennis balls.

The threat of continuous oil pollution ended six months later when the barge was finally beached in shallow water and pumped dry.

During those months a Vancouver contractor tackled what is believed to be the deepest salvage job of its type ever attempted—and won.

It cost more than a quarter of a million dollars to raise the 200 foot barge, but on the other side of the ledger was the possibility of ruined beaches, landbound cottagers, endangered wildlife and reduced tourist dollars.

Owned by an American company, Barge No. 10 had been chartered to the Gulf of Georgia Towing Company of Vancouver to move some 40,000 to 60,000 barrels of heavy fuel oil from Anacortes, Washington to Ioco, B.C.

After the sinking, Captain George Dobereiner, master of the tug *Gulf Bird* which was towing the barge, said that when he left Anacortes on March 4 everything was ship shape. But the next morning strong winds and heavy swells were encountered. About 10 a.m. the barge started to sink. The *Gulf Bird's* speed was reduced. It didn't help. In less than a minute the barge was vertical with only six feet of the after end above water.

The Captain ordered a line for the barge's stern cleat in an attempt to jockey the sinking vessel to nearby Paisley Island. It was no use. About half a mile east of the island it sank.

An undetermined amount of oil escaped during the sinking, and beach pollution followed almost immediately. The chartering company used extensive quantities of a chemical compound to dissolve the oil and clean the surface of the sea. It spread out booms to contain the affected area and sent divers down to the 230-foot level, man's underwater limit, to plug vents and tank openings.

After four days of feverish effort the company advised the steamship inspection division of the Department of Transport, whose responsibility it is to administer oil pollution regulations



The first weeks of the salvage operations were severely hindered by foul weather. Peter Batten shot this photo during a fierce windstorm.

and prosecute violations, that the depth of the barge and the danger to divers made it mandatory that they abandon the operation. Salvage attempts, the company believed, might rupture the hull and cause all the oil to escape.

The cause of the sinking was unknown, so no one could be prosecuted for the resulting pollution. The wreck was not a hazard to navigation because of the extreme depth at which it lay, so the charterers could not be ordered to raise it. However, residents complained the oil pollution was increasing.

In the public interest D.O.T. sought the advice of the Department of Public Works and it was decided to call in salvage experts, McKenzie Barge and Derrick Ltd. of Vancouver, for consultation. They were asked to find answers to several questions. Had the low temperatures reduced the oil to a tar-like consistency? Would shifting currents cause further leakage? Could the barge be lifted? What would it cost? If the barge were left on the bottom, could it be permanently sealed up to prevent escape of the oil still in its hull?

While the salvors wrestled with these problems, the charterers, Gulf of Georgia Towing Company, tangled with a few of their own. They were concerned with the amount of oil pollution that had already occurred. Divers sent down March 26 reported the barge had shifted some 50 feet and more oil was escaping. It was lying on the sea bed in such a way that the high end (the stern) was in 230 feet of water and the low end in more than 300 feet.

For three days after the reported shift, divers kept going down to patch leaks. But it was laboriously slow because each diver was limited to a 12-minute dive in any 12-hour period.

Then came the expert opinion from McKenzie salvors. In effect they said the barge couldn't be patched. Salvage was the only long-term solution to this constant source of pollution.

McKenzie Company, on the basis of the lowest bid, was given the job. Peter Batten, of steamship inspection at Ottawa, was sent out to work with Rod Boomer and J. C. Young, steamship inspection at Vancouver.

The first meeting between the D.O.T. people, D.P.W. District Engineer A. W. Walkey and the salvors was to come up with a plan to raise the barge, not only in the most economical manner, but also without damage to the hull structure.

With the low end of the barge considerably below the depths divers could safely descend to, they knew their methods were severely restricted. The first course of action was to pump the



Stern of oil-blackened barge as it was being brought to surface. At this point the bow was still resting on bottom in 28 feet of water.

water out of the barge's after compartment which was now in the highest position.

The estimated lifting weight of the barge and its cargo was 275 tons (it was found later, however, that it should have been about 325 tons because of the mud and sand that collected on the deck while the barge was on the bottom) and it was calculated that pumping in air would give additional buoyancy equivalent to a 70 ton lift. This, combined with two 50 ton floating derricks hooked to slings around the high end of the barge would, they hoped, be sufficient to raise it.

Salvage operations began early in June. The first snag was heavy weather—southeast winds of considerable strength blowing for as long as 48 hours at a time. Diving was impossible and holding the derricks and assorted scows in position required two tugs and plenty of luck. Even so some damage was done to the surface equipment.

Finally, the divers managed to attach the air hose to the barge and cut a hole about 12 inches in diameter at the turn of the bilge to allow water to escape. Air pressure was then applied with the highest capacity compressor that could be found in Vancouver. As air was pumped into the compartment, the barge's weight was taken on the slings by the derricks. The salvage crew fully expected this attempt would be successful.

At 10 p.m. Saturday, June 27, there was great dismay when a tremendous quantity of air bubbles were seen breaking the surface. It was obvious the compartment was not air tight after all and divers were sent below to survey the hull.

They reported the deck plating had been set up a few inches and it would take much time and effort to weld cracks.

Basically the time problem lay in the divers themselves. The story of the diving in this operation is an epic in itself.

Six of the best divers in Canada were used; four skin divers and two deep-sea divers. All were, of course, working at maximum depth and the strain brought about two serious attacks of the bends which required hospitalization. Another attack was serious enough to require the diver to be in a decompression

chamber for 48 hours with a doctor in attendance. Medical restrictions put on the divers allowed them to stay on the bottom only 12 minutes in any 12-hour period—and the Workmen's Compensation Board limited the dives to one per day per man with a day off every five.

Sometimes when the divers got down to the sunken barge they couldn't do a specific task at all or, after they surfaced, they couldn't remember whether or not it had been done correctly.

They always worked in pairs with the skin divers having an advantage over the deep-sea divers inasmuch as they had more freedom to manoeuvre. Although the deep-sea divers, or hard-hat divers as they are called, were more cumbersome because of heavy equipment and air hoses, they had the advantage of being able to talk back and forth with the people on the surface, which often assisted operations.

After several weeks of routine diving to repair the deck plating the barge was judged airtight and a second attempt was made to lift it.

Again the weight was taken on the derricks, and air pumped into the after end compartment. Just when the barge began to raise off the bottom the lifting slings carried away. Another failure. Fortunately, dropping this weight back onto the ocean bed did not result in injuries or further damage to the barge itself.

It was now mid-August and the barge had been moved only 70 feet towards shore. Leakage was steady.

Once again Rod Boomer, Pete Batten, A. W. Walkey and the salvors got together to decide on new or different measures. They agreed that more power was needed on the surface, not only to lift the offending hulk, but to drag it into the beach.

Heavy anchor cables were dragged under the high end of the barge and two more floating derricks were added. All went well and by the first week in September they were ready to attempt another lift. This time failure came when the mast on the fourth derrick buckled.

Back at the conference table it was decided that what was needed was the large derrick from nearby Esquimalt naval dockyard. It was also agreed that a study of the contours of the sea bed to determine the barge's route to shore, would be helpful.

The Canadian Navy cooperated to the fullest extent. On September 21 they received the official request to borrow the derrick and within 24 hours it arrived to join the flotilla of three derrick scows, four tugs and several smaller scows.

The plan was to position a scow over the wreck, pass two lengths of 2½ inch diameter wire under it and secure the lifting wires to four sets of lifting tackles on the deck of the scow.

The total lifting effort then obtained would be from the combined efforts of the three floating derricks and the lifting scow, along with the air being pumped into the after compartment.

They hoped to raise the oil barge from the sea bed, lift it bodily into shallower water and set it down again while the lifting tackle was overhauled. By repeating the same performance

several times, the wreck should be brought right up on to the beach.

All was ready for the fourth try.

This time it was successful! The barge was picked up bodily from the sea bed and brought into shallow water. On October 13 Rod Boomer wired Director of Marine Regulations Alan Cumyn at Ottawa: "By use of derricks and lift scow, oil barge 10 raised over weekend from 250 foot depth and landed sandy bottom 28 feet water one hundred yards off Paisley Island... expect to be able surface barge later this week."

The job was done. All that remained was the mopping up. About 4,500 barrels of oil and water mixture were pumped out and delivered to Imperial Oil's refinery at Ioco. Temporary patches were slapped on the barge, she was cleaned up and towed to Vancouver harbor to be disposed of by Crown Assets.

A survey of Howe Sound made shortly after the barge was raised showed that the oil pollution was gradually diminishing. Winter should clean up most of the remaining black muck and erase the ugly memory of the sinking of Barge No. 10.

Rod Boomer, supervisor of steamship inspection at Vancouver, inspected the stern end of the barge shortly after the raising while it was still sling borne. Note how sling post off right corner was partially severed and bollard securing clamp had lost its collar and turned to a precarious position.



Watching every phase of the successful lift operations was Department of Public Works District Engineer A. W. Walkey. Steamship Inspectors Rod Boomer and J. C. Young (white coveralls) are in background.



From Staff Statistics to Stock in Stores—the data processing centre processes all

Located at the basement level of No. 3 temporary building at headquarters is the little-publicized but vitally important data processing centre of the department. Headed by Don Burgess and staffed by 45 specially trained men and women, the centre does work for all branches and divisions of the department.

Its stock in trade is figures and these it turns out to cover every conceivable aspect of the department's operations—personnel statistics, allocation of radio frequencies, air traffic movements, air accident investigation statistics, stock control and inventory, pilotage tariff calculations, financial estimates, stores items and on and on.

Like business and industry throughout the country, D.O.T.'s record keeping requirements have mounted over the years and the need for a data processing system that could be expanded to meet the ever-increasing demands on it was paramount. And so last November the centre, by the addition of an IBM 1401 Data Processing System, was converted into a large, flexible, more sophisticated computer installation ready to tackle future demands.

The data processing centre was created in 1953 to eliminate manual systems of producing radio frequency data, radio licensing, etc. During the next decade, like Topsy, it grew and grew, spurred on by necessity to make more and more use of its equipment.

The 1401 installation is the first part of a program which by late 1965 will see D.O.T. operating the most advanced equipment in the business computer field. In fact, equipment on order for the department is so advanced it is not yet available. The 1401 is an interim measure until the IBM system/360 can be delivered.

D.O.T. is one of the first operating government departments to have such sophisticated equipment. Others, like Trade and Commerce's Dominion Bureau of Statistics and Finance's income tax and treasury divisions, have, of course, an urgent need for equipment capable of turning out zillions of figures, forms and reports in seconds, minutes or days depending on the complexity of the job. But Transport is, perhaps, the first to turn out such material in volume for its own use. Before 1401, (almost B.C. in the minds of the D.P. centre) D.O.T. rented time on the same type of machine from the treasury division of Finance to supplement its conventional punched card equipment.

The 1401 provides high speed input-output, arithmetic and logical ability, with stored program techniques. It can carry out a series of instructions designed to solve a specific problem (this is called a program) at high speed. Because it stores its instructions internally it is called a stored program system.

Known as a digital computer, it is really a glorified adding machine that on instruction can subtract, divide, multiply and even make simple decisions if the correct information is fed into it. This is perhaps the most important point. A computer, no matter how advanced or complex, is not a brain and does not have human abilities to solve problems. Information, accurate information, must be fed into it before it can turn out any kind of an answer. As Mr. Burgess was quick to point out to News on the DOT, the computer's output (i.e. its answers) is only as good as its input. Therefore the people who instruct the machine, the programmers, are obviously the key to the whole operation.

There are six programmers on D.O.T.'s staff. They must design a set of instructions for every job. The more familiar a programmer is with the department's operations in any specific job, the better program he can come up with. He works with source documents and people. First he must determine what results the machine is required to produce and then, from the material he reads and the people he interviews, he must design a program of instructions to feed into the machine to get the desired results. It may take five minutes to produce a simple program, but in many cases it can take three weeks or longer. In effect a programmer "talks" to the machine. He has a vocabulary of key words which he translates into a code language of letters, symbols and numbers.

The centre is responsible for processing data by mechanical and electronic means for all branches and divisions of the department. This means large-volume statistical analysis, machine accounting, and recording and processing. It involves editing, coding and transposition of information to cards and tapes, maintaining control records, operational costing and review of existing applications to determine their current and continued need, as well as study and research related to mechanization of new applications.

Since last July the staff of 23 keypunch and verifier operators, 6 programmers, 6 computer operators and 10 assorted supervising personnel, typists and clerks, have been carrying out the gigantic task of transferring information from some 6,000,000 keypunch cards to 200 tapes for use on the new computer. (Each tape can hold the information previously held on 100,000 cards). All the jobs already on punch cards had to be reprogrammed before they could be transferred to tape. This, along with the daily workload which still went on, kept the section literally hopping. But now with a new year under way they have completed the job and can offer the department an efficient service to extend and improve management and engineering efficiency.

(Continued on page 12)



The key punching and verifying section, staffed by 23 operators, performs the first step in the data processing operation. Information from source material is punched onto cards. Once verified it is converted to magnetic tape for feeding into computer.

La section de perforation et de vérification des cartes—qui comprend 23 opérateurs—accomplit la première phase de l'opération de traitement des données. L'information provenant de la documentation de base est perforée sur des cartes. Après vérification, elle est portée sur une bande magnétique qui alimente la calculatrice.

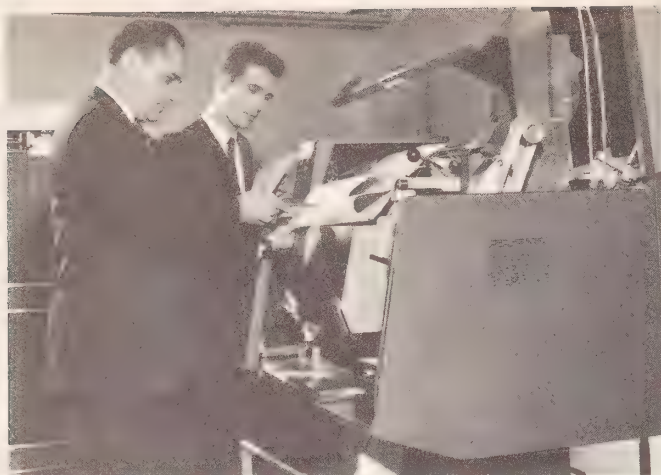
Computer programmers Terry Strachan (left) and Gerald Gervais are confronted with a "logic" problem in programming a job for the telecommunications branch.

Les programmeurs Terry Strachan (à gauche) et Gérald Gervais ont à résoudre un problème de «logique» lors de la mise en programme de données provenant de la Direction des télécommunications.



Gilbert Lavigne, an electronic data processor, puts a bundle of cards through the high speed sorter. Used for sequencing, selecting or rearranging cards, it operates at the rate of 1,000 cards per minute.

Gilbert Lavigne, affecté au traitement électronique des données, dépose un paquet de cartes dans une trieuse à grande vitesse. Utilisée pour ordonner, choisir ou réassortir les cartes, cette machine fonctionne au rythme de 1,000 cartes à la minute.



Data Processing Manager Don Burgess (left) and Programmer Gerald St. Amour check out a "memory dump" on the high speed printer to see if instructions relating to a program assembly are correct. This printer, as well as providing accuracy checks, produces the answers or results to the problems fed into the computer.

Le chef du traitement des données Don Burgess (à gauche) et le programmeur Gérard Saint-Amour vérifient un «transfert de mémoire» sur l'imprimante à grande vitesse afin de constater si les instructions relatives à un programme sont correctes. Cette imprimante, en plus d'assurer des vérifications de précision, donne les réponses aux problèmes posés à la calculatrice.



More than 200 tape records are maintained and stored in the magnetic tape library. John Taggart, tape librarian, is responsible for selecting tapes and making out job tickets for specific jobs.

Plus de 200 enregistrements sur bande sont gardés dans la bibliothèque. Le bibliothécaire, John Taggart, a pour tâche de choisir les bandes et de préparer les fiches des travaux à exécuter.

The air-conditioned computer room houses the IBM 1401 data processing equipment consisting of (clockwise from the left) three magnetic tape drives, a card reader punch, the central processing unit with control panel, and a high speed printer. Electronic data processing operators in the photo are Emily Moffitt, Jack Regan and Lucien Desjardins (seated)

La salle de calcul climatisée loge le matériel de traitement des données IBM 1401 qui comprend (dans le sens horaire à partir de la gauche) trois dispositifs d'entraînement de bande magnétique, un lecteur de cartes perforées, la machine de traitement centrale et son tableau de commande, et une imprimante à grande vitesse. Les opérateurs de traitement électronique sont Emily Moffitt, Jack Regan et Lucien Desjardins (assis).



Tout passe par le Centre de traitement des données du ministère des Transports

Au sous-sol de l'immeuble temporaire n° 3 du bureau central du Ministère est situé le Centre de traitement des données dont on entend peu parler mais qui joue un rôle fort important. Un personnel de 45 employés masculins et féminins, qui ont subi une formation poussée dans leur domaine, y poursuit, sous la direction de M. Don Burgess, des travaux pour toutes les directions et divisions du Ministère.

Ce Centre se spécialise dans des chiffres qui embrassent tous les aspects imaginables des opérations du Ministère: statistiques sur le personnel, assignation des fréquences radio, mouvements du trafic aérien, statistiques sur les enquêtes relatives aux accidents d'aviation, contrôle et inventaire des stocks, calcul des tarifs de pilotage, prévisions financières, statistiques sur les magasins, etc.

Tout comme dans le cas des entreprises commerciales et industrielles d'un bout à l'autre du pays, les besoins du ministère des Transports en matière de statistiques se sont accrus au cours des années; il était donc essentiel d'établir un système de traitement des données d'une grande souplesse en vue de satisfaire aux besoins de plus en plus nombreux qui se manifestent dans ce domaine. C'est pourquoi en novembre dernier, par suite de l'installation d'un ordinateur électronique IBM 1401, ce Centre est devenu un centre de calcul important, souple, plus perfectionné, afin de répondre aux besoins de l'avenir.

Le Centre de traitement des données a été établi en 1953 pour remplacer le matériel manuel servant à l'établissement de données relatives aux fréquences radio, aux licences de radio, etc. Au cours de la décennie suivante, il n'a cessé de croître, à mesure que s'affirmait la nécessité d'une plus grande utilisation de son matériel.

L'installation de l'ordinateur 1401 constitue la réalisation de la première partie d'un programme, grâce auquel à la fin de 1965 le ministère des Transports utilisera un matériel des plus perfectionnés dans le domaine du calcul. En réalité, le matériel qui a été commandé pour le Ministère est tellement moderne qu'il n'est pas encore disponible. L'ordinateur 1401 a été installé provisoirement jusqu'à ce que l'ordinateur IBM 360 puisse être livré.

Le ministère des Transports est un des premiers ministères de l'État à utiliser un matériel aussi perfectionné. D'autres organismes, comme le Bureau de la statistique du ministère du Commerce et les divisions de l'impôt sur le Revenu et du Trésor du ministère des Finances, ont évidemment un besoin plus pressant de matériel pouvant établir des quantités énormes de chiffres, de formules et de rapports en l'espace de secondes, de minutes ou de jours, selon la complexité du travail. Toutefois, le ministère des Transports est peut-être le premier à les établir en quantité pour son propre usage. Avant l'ère de l'ordinateur 1401 (presque avant l'ère chrétienne, au dire des employés du Centre des

données) le Ministère louait le même genre d'installation, pour une certaine période, de la division du Trésor du ministère des Finances afin de compléter le travail de ses machines classiques à cartes perforées.

L'ordinateur 1401 peut exécuter des opérations arithmétiques et logiques rapides à l'entrée et à la sortie, selon des programmes internes. Il peut remplir une série d'instructions (qu'on appelle un programme) destinées à résoudre très rapidement un problème déterminé. Étant donné qu'il emmagasine ses instructions, on l'appelle système de programme interne.

Connue sous le nom de calculatrice numérique, il s'agit en réalité d'une machine à additionner perfectionnée qui, selon les instructions qui lui sont données, peut soustraire, diviser, multiplier et même prendre certaines décisions faciles si on lui donne les renseignements exacts. C'est peut-être là le point le plus important de ce système. Une calculatrice, peu importe son degré de perfectionnement ou de complexité, n'est pas un cerveau et n'en possède pas les aptitudes pour résoudre des problèmes. Elle doit recevoir des renseignements exacts avant de fournir une réponse. Ainsi que M. Burgess n'a pas manqué de signaler au rédacteur du présent article, la valeur des données de sortie (les réponses) n'est pas supérieure à celle des données d'entrée. En conséquence, le rôle le plus important dans toute cette opération revient aux personnes qui alimentent la calculatrice, c'est-à-dire aux programmeurs.

Le personnel du Centre comprend six programmeurs. Ils doivent établir une série d'instructions pour chaque opération. Plus un programmeur est au courant des opérations du Ministère relativement à un travail particulier, plus le programme qu'il établit est au point. Ses sources de renseignements sont des documents et les employés des divers services. Il doit d'abord déterminer quels résultats l'ordinateur doit fournir, puis d'après les ouvrages qu'il lit et les personnes qu'il interroge, il doit établir un programme d'instructions qui sera transmis à la calculatrice en vue des résultats attendus. L'établissement d'un programme non compliqué peut prendre cinq minutes, mais dans plusieurs cas il peut prendre trois semaines ou plus. En réalité, le programmeur "parle" à la machine. Il possède un vocabulaire de mots-clefs qu'il codifie au moyen de lettres, de symboles et de nombres.

Le Centre est chargé du traitement, au moyen de procédés mécaniques et électroniques, de données intéressant toutes les directions et divisions du Ministère. Il doit donc effectuer l'analyse statistique de nombreux chiffres, exécuter des opérations comptables, inscrire et traiter des données. Il doit arranger et codifier les renseignements, les porter sur des cartes et des bandes, tenir des registres de contrôle, établir le coût d'opération et effectuer la révision des demandes actuelles afin d'en déterminer le besoin actuel et continu, et poursuivre des études et des

The system is comprised of a central processing unit with magnetic core memory which contains all logic and arithmetic hardware of the system; a 1402 card reader punch which seems to "eat" cards; a 1403 printer, which prints reports at the rate of 600 lines a minute (at 132 characters to a line that works out to 1320 characters per second compared to a good typist's approximately six characters per second); and three magnetic tape drives which can read information into the computer at 20,000 characters per second.

To understand a little better just how the system turns out such volumes of statistics and figures, one has to see the various pieces of equipment operating. It is very impressive—if a little less than comprehensible.

Take, for example, the complex job of turning out statistics for airport and international and domestic originations and destinations.

The 1401 can turn out in eight hours what it previously took the old unit record equipment 152 hours to produce. By using tape to store the information it requires only two per cent of the space previously occupied by cards and accuracy is increased by the reduction of human intervention.

In this particular application the computer automatically assigns weight and class to aircraft. It is "told", for instance, that the type of aircraft is a Viscount and it immediately "knows" it weighs 31 tons and it is turbo prop class. Another thing it does automatically is convert Greenwich Time to local times — 20.00 GMT to 3.00 p.m. EST.

In this operation (as in all operations) the computer is capable of providing more accurate statistics than any manual method and, with the use of magnetic tape, such information can be quickly and readily exchanged with the United States. This places Canada in a more favorable position than before when negotiating for international air routes.

Senior and middle management people are now undergoing indoctrination courses to familiarize themselves with the centre's capabilities and the way in which it can help them.

Once the new 360 system is installed, D.O.T. will be able to rent time to other government departments. The minimum rate of combined machine and operator time is roughly \$35 an hour, which seems very reasonable for a service that is infinitely more speedy and accurate than any mere human.

recherches concernant la mécanisation des nouvelles demandes.

Depuis juillet dernier, le personnel du Centre, qui compte 23 opérateurs de perforatrices et vérificatrices, 6 programmeurs, 6 opérateurs de calculatrice, 10 employés divers (surveillants, dactylographes et commis) a accompli un travail de géant, soit l'inscription de renseignements provenant de 6 millions de cartes perforées sur 200 bandes servant à la nouvelle calculatrice. (Chaque bande peut contenir les renseignements qui étaient inscrits antérieurement sur 100,000 cartes). Tous les travaux déjà inscrits sur les cartes perforées ont dû faire l'objet de nouveaux programmes avant d'être portés sur les bandes. Les employés de la section, qui devaient également accomplir leur travail quotidien, ne savaient vraiment où donner de la tête. À l'aube de la nouvelle année, ils ont maintenant terminé ce travail et sont en mesure d'offrir au Ministère un service efficace en vue d'augmenter et d'améliorer l'efficacité de la gestion et des services techniques.

L'installation comprend un ordinateur principal doté d'une mémoire à tores magnétiques pour toutes les opérations logiques et arithmétiques; un lecteur de cartes perforées 1402 qui semble «manger» les cartes; une imprimante 1403, qui imprime des rapports au rythme de 600 lignes à la minute (à 132 caractères par ligne, cela représente 1,320 caractères à la seconde, en comparaison d'environ 6 caractères à la seconde que peut écrire une dactylographe d'expérience); il comprend trois lecteurs de bande magnétique qui peuvent lire les renseignements qui entrent dans la calculatrice au rythme de 20,000 caractères à la seconde.

Afin de mieux comprendre comment l'ordinateur réussit à produire une si grande quantité de statistiques et de chiffres, il faut voir en fonctionnement les diverses machines. C'est très impressionnant bien qu'assez difficile à comprendre.

Prenons le cas, par exemple, du travail complexe qui consiste à produire les statistiques relatives aux aéroports ainsi qu'aux

départs et aux arrivées des vols internationaux et intérieurs.

L'ordinateur 1401 ne prend que huit heures pour fournir les renseignements que l'ancienne installation prenait 152 heures à produire. En se servant de bandes pour emmagasiner les renseignements, il faut seulement 2 p. 100 de l'espace que prenaient antérieurement les cartes, sans compter que le travail est plus précis vu que l'intervention humaine est moindre.

Dans le cas susmentionné, l'ordinateur calcule automatiquement le poids et la catégorie d'un aéronef. On lui «dit», par exemple, qu'il s'agit d'un Viscount et il «connaît» immédiatement le poids de l'appareil qui s'établit à 31 tonnes et sa catégorie, celle des avions à turbo-hélices. Il peut aussi convertir automatiquement le temps de Greenwich en heure locale, par exemple 20.00 TMG à 3 p.m. HNE.

Dans cette opération, comme dans toutes les opérations, la calculatrice peut fournir des statistiques d'une façon plus précise que par toute méthode manuelle; grâce à l'emploi de bandes magnétiques, ces statistiques peuvent être échangées rapidement et facilement avec les États-Unis. Le Canada occupe ainsi une situation beaucoup plus favorable qu'antérieurement lorsqu'il doit négocier pour l'établissement des routes aériennes internationales.

Les fonctionnaires de l'échelon supérieur et moyen des services administratifs suivent à l'heure actuelle des cours qui leur permettront de connaître les possibilités qu'offre le Centre ainsi que la façon dont ils peuvent en tirer profit.

Une fois que le nouvel ordinateur 360 sera installé, le ministère des Transports pourra le louer à d'autres ministères de l'État. Le taux minimum de location de la machine et de l'opérateur est d'environ \$35 l'heure, ce qui semble un prix très raisonnable pour l'utilisation d'un service qui est beaucoup plus rapide et plus exact que tout service assuré par un simple employé.

Space- Age PUFFBALL

Ninety-five-foot dacron cover for soon-to-be-installed antenna on D.O.T. communications satellite ground station near Mill Village, N.S. is neatly folded (1), mushrooms as air is pumped in (2), then sags over edges, crowding trucks (3), but ends up as tight balloon (4). Filling of the radome took place early in November.



To keep the planes flying, the department trains air services personnel in a special school designed with

AN EYE TO THE FUTURE

by John de Bondt

Time was when a career in aviation meant you were either a pilot or a mechanic.

To keep the planes in the air today it takes air traffic controllers, radar operators, meteorological observers, radio operators, plus a multitude of highly qualified technicians to look after the incredible array of electronic equipment.

The department is responsible for providing all these services and employs thousands of men and women who possess the special skills and know-how needed in these jobs.

Where does it get such personnel? High schools provide the basis for many of these jobs but they don't offer the sharply focused training necessary. Vocational schools teach many useful and even indispensable skills but they don't turn out the specialists needed.

That is why, in 1959, the department established its central Air Services Training School (ASTS) at Ottawa International Airport—a consolidation of several smaller government courses previously run in scattered parts of the country.

Here, in classrooms and workshops, through lectures and practice under carefully simulated "on the job" conditions, the department trains the elite corps of men and women who carry out that vital utility known as air services.



WHAT MAKES IT TICK—Instructor in school's instruments laboratory explains fine points about transistors to student technician looking through magnifying glass.

Most of the school's students are young people about to embark on a career in aviation. Many, too, are experienced D.O.T. employees who are getting more advanced knowledge to keep up with the new and increasingly complex types of equipment continually being installed.

This combination of courses for beginners and brush-up programs for "old hands" makes for the fascinating curriculum at the D.O.T. school.

Courses Cover Three Categories

The courses fall into three main groups: air traffic control, meteorology and telecommunications.

The longest course given at the school is for air traffic controllers. It lasts 20 weeks. High school graduates are recruited across Canada for this course.

About half the time is spent in the classroom while the rest of the course is devoted to practice under simulated conditions. These simulated exercises are done with two electronic training devices that let the student practice the control of air traffic under conditions that are almost a perfect duplicate of the real job ahead.

After his graduation the student is assigned to a control tower for three months of practical training before receiving his air traffic controller's license.

Two more courses for air traffic controllers are available at the school. One is a two-week radar course for qualified area controllers who have no radar experience, the other a three-week advanced technical course for supervisors.

Basic and Advanced Meteorological Courses

To train meteorological technicians capable of taking weather observations needed in the preparation of forecasts, the school presents a three-month basic weather course. High school graduates are hired as either surface observers or radiosonde observers. The latter are sent on to a 16-week upper atmosphere course at Scarborough, Ontario, after completion of the course in Ottawa.

In addition to the basic course for newly recruited trainees, the ASTS presents a number of advanced courses in meteorology to practising meteorological technicians.

Each of these courses is designed to increase the employee's knowledge in meteorology and to prepare him to perform the specific duties of higher positions. One course teaches them how to provide weather information to pilots, another trains them to support the forecaster in the preparation of weather maps and charts, and still another covers radar.

Six other courses are presented and more are in the planning stage.

Over 20 Telecommunication Courses

In the fast-growing field of telecommunications and electronics, the ASTS trains employees from three main occupational groups: radio operators, electronic technicians and radio regulations personnel. More than 20 different courses have already been presented in these three areas and a dozen or so more are in the offing.

For radio operators there is a four-and-a-half month course. These men have already had training in the elementary aspects of their occupation and hold international certificates of proficiency.

They study Department of Transport procedures, and the use of departmental equipment. They also take special training to increase their typing and Morse code speeds.

A month and a half of the course is set aside for training in the taking of meteorological observations, a task that is done by operators in some of the department's aeradio stations.

Radio technicians are given courses in the use of aviation and weather radar as well as marine radar such as used aboard ships of the department's Canadian Coast Guard fleet.

Other courses cover the Very High Frequency Omni-range, Instrument Landing System, airborne radio equipment and other related electronic aids, automatic error-correcting and channelizing equipment, transistor and miniature techniques, marine radio beacon training for lightkeepers, and radio training for Department of Northern Affairs personnel assigned to isolated posts.

In the realm of radio regulations the school trains radio inspectors and monitoring operators.

The inspectors study such subjects as the enforcement of international regulations, assignment of frequencies to radio stations, detection and remedying of radio interference, and the licensing and inspection of radio broadcasting stations from the big commercial organizations down to the taxi stand operator's communications system.

The school also trains monitoring operators whose job it is to police the radio spectrum to ensure that all users remain on their assigned frequencies and conduct communications in accordance with international regulations.

School Has Three Establishments

The ASTS occupies three locations. The classrooms and the electronic trainer for aspiring air traffic controllers, as well as all meteorological training laboratories, are situated in the department's air terminal at Ottawa International Airport.

Maintenance of equipment is taught in the airport's former terminal, where there is plenty of room to dismantle, and put together again, a bewildering array of electronic devices.

The third site is at Carp, Ontario, near Ottawa, where seven buildings at the D.O.T.-owned airport are set aside for practical training on radio aids to air navigation. This equipment would interfere with aviation if it were installed at busy Ottawa International Airport.

The buildings at Carp are typical of those at real operational sites and provide students with conditions almost identical to the ones they may expect after being assigned to departmental duty.

The department has drawn the teachers from its own numerous establishments throughout Canada. Head of the school is Art Johnson, a seasoned air traffic controller who spent five years as a staff training officer with the training and development division before taking charge of the ASTS.

Chief instructor of controllers is Archie Novakowski, also a former controller. Clark Stewart, former operations supervisor for radio technicians in the Winnipeg region, is chief instructor of telecommunications, while Otto Andres, a former D.O.T. meteorological instructor attached to the R.C.A.F., is in charge of weather training.

***LIGHT ON THE SUBJECT**—Aspiring air traffic controllers manipulate tiny projectors (centre of table) that throw dots of light on ceiling screen. The dots represent aircraft which students "pilot" according to instructions given them through head phones by other students in adjoining room who see ceiling picture on closed circuit TV.*





MODERN ART—Huge diagrams adorn walls of classroom in former terminal at Ottawa International Airport. The terminal is now used by the air services school for refresher electronic technicians training.

Short Courses Dictate Study Efficiency

The combination of modern teaching methods and a carefully selected student body have resulted in a curriculum designed to teach a lot in a very short time. To enable them to keep up with the school's pace, students are taught efficient study habits.

Apart from giving such obvious—but oft forgotten—hints as “get enough sleep” and “take notes”, the school points out that it is a good idea for students to team up. “Students who live together and attend the same course normally get higher marks”, one booklet says. “They are able to discuss mutual problems, exchange ideas and assist each other.”

The school also recommends working through the easiest questions first and not wasting time on problems a student cannot solve.

It endorses the so-called *SQ3R* method, advocated in many universities.

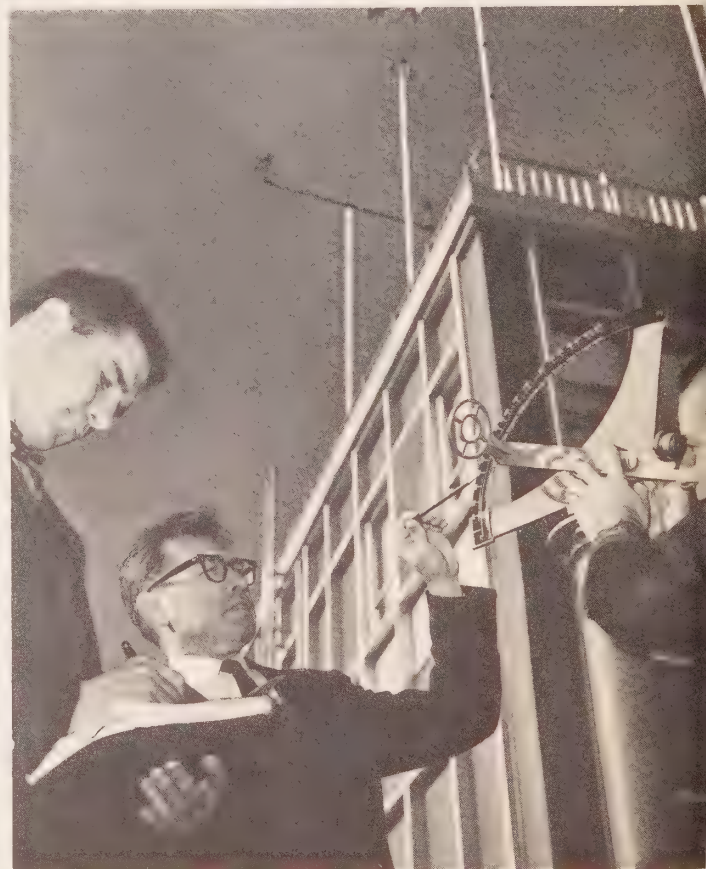
The S stands for Survey: get a general picture of the work, for instance by reading the paragraph headings only. The Q means Questions: turn the headings into questions; ask yourself what they mean. The 3 R's stand for Read, Recite, Review. Read the material to answer your own questions about the paragraph headings, recite or test yourself by repeating the main points and finally review by quickly re-reading the material covered.

An Eye To The Future

The school produced its first graduates in 1960 and Superintendent Johnson considers the institution still in its infancy.

“I can see a fascinating future for the ASTS,” he says. “The curriculum can, and probably will, be increased by many specialized courses dictated by automation, supersonic aviation and space age communications.

“Apart from the advanced operational and technical courses that will undoubtedly be needed, the school may well be called upon to branch out into the fields of administration and supervisory training, and even into languages.”



WEATHER-WISE—Student weather observers take readings on roof of terminal building.



Focal point of Lakehead air terminal complex is matching but separate air traffic control tower.

The Sword and the Tomahawk or Adventures in Opening the Lakehead Air Terminal

Two issues ago, News on the DOT promised that the opening ceremony for the Lakehead air terminal late in 1964 would take the Rube Goldbergian cake for sheer inventiveness.

For those who have been following our accounts of the department's adventures along the terminal inauguration trail, here is the inside story of how prospects of an Indian whoop-up went up into smoke signals.

After the department had used a variety of devices, from a power saw to a chorus line, to symbolize the official opening of buildings, Winnipeg region came up with an idea for the Lakehead ceremony that promised to top all previous occasions for colorful pomp and circumstance.

Mr. Pickersgill would be made an honorary Indian Chief, and, bedecked in feather head dress, would cut a rope with a tomahawk.

This seemingly innocent deed would cause a chain of things to happen. With the help of that post-Indian miracle, electronics, the snap of the rope would make a model of a birch bark canoe rise into view, signifying the Lakehead's past, while on the other side of the lectern the model of a Vanguard aircraft would majestically swing into sight. At the same time, all because of that deceptive tomahawk, floodlights would come on to illuminate the whole spectacular scene.

Now years ago, when the department wasn't so adroit at swinging these ceremonies as everybody says it is now, someone had the bright idea of using an airplane propeller at a terminal opening. Driven by a small motor, the propeller turned slowly, barring the entrance to the new building.

At the *moment suprême* the propeller would be stopped in a vertical position so dignitaries could walk past it.

You guessed it: something went wrong and the propeller wouldn't stop turning. Ever since that day the information division, which carries out the liaison between region and deputy minister's office in these things, has been scared stiff of electronic gimmicks.

Thus it was that a timid information officer persuaded the regional director of air services in Winnipeg to make the canoe and aircraft displays stationary, so that the drop of the tomahawk would do nothing but simply cut the rope. This would still leave the epic qualities of the Indian initiation.

Then, a few weeks later, the Minister decided that Mines Minister W. M. Benidickson, whose constituency is near the Lakehead area, would perform the official act of opening the building.

A hurried pow-pow with the Indian Chief reassured us that both Mr. Benidickson and Mr. Pickersgill could be made honorary Chiefs.

It wasn't until another few weeks had passed that word came from the Lakehead like thunder from a clear sky: the whole thing was off. No Indian ceremony. None of this honorary chief stuff.

Another pow-pow ensued. What happened? Were the Indians mad at us? Had we done something wrong?

No, but the Indian tribe had just heard that we wanted to hold the ceremony indoors. Indian tradition dictated a big bonfire and they had assumed all along that it would be outdoors. The airport fire marshal wasn't thrilled by the thought of a fire in the middle of the waiting room and Chief Architect E. Daoust frowned on the idea, too, so they had decided to forget about the whole thing.

It will be to the eternal credit of the Winnipeg region's quick thinkers that another opening theme was found within hours.

Mr. Benidickson and Mr. Pickersgill would now be made honorary "Lakehead Admirals"—a title usually bestowed, as a tourist promotion stunt, on motorists completing the scenic tour around Lake Superior.

Urgent business in the House of Commons at the last moment kept Mr. Pickersgill in Ottawa, but Mr. Benidickson carried out the nautical theme with perfect aplomb. Two past presidents of the Lakehead International Highway Association, Admirals Brien O'Brien and C. W. King, initiated the Mines Minister, pointing out that he qualified on two counts, as a dedicated servant of his country and as one who did make the circle tour.

Mr. Benidickson donned a Lord Nelson hat and a sword, and with a magnificent swoop cut a hawser in front of the lectern.

Explaining that the Department of Mines and Technical Surveys operates several ships for oceanography and other research the Minister declared he was glad he could now talk on equal terms with the nautical types in his department.

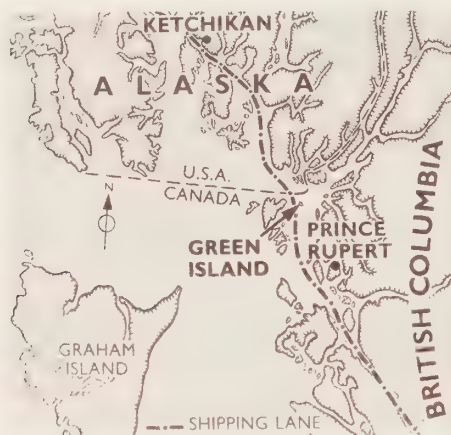
Arrangements for the successful ceremony were directed by Winnipeg RCCA Frank Hughes. Others active in the preparations included Airport Manager Walter Heikkinen; his secretary, Mrs. Horne; Jack Roebuck, who built the platform; Claude Brerton, Cliff Cearns, Bob McLeod, Lance Podd, Bill Stunden and Wilbur Wright. Chairman of the colorful event was RDAS W. E. Fenn.

JOHN DE BONDY

Lighthouse Patrol — by Bruce Young

(Reprinted from Esso "Air World")

Green Island is Canada's last manned outpost in the North Pacific. It is a small treeless islet made up of rock and muskeg which is battered almost incessantly either by south-westerly ocean gales blowing through the Hudson Bay Passage or by off-shore north-easterly winds funnelling down the Portland Inlet. The wind direction varies with the weather, which is seldom kind and gentle.



D.O.T. maintains a lighthouse on Green Island to assist vessels using a busy shipping lane which crosses the paths of the winds. It is Canada's last responsibility to mariners heading towards Alaska; a few miles to the north at the Canada/Alaska boundary, the U.S. Coast Guard takes over.

The Prince Rupert district marine agency, headed by Captain Edward Ormsby, looks after all navigational aids from northern Vancouver Island to Green Island. The network of 14 manned and 300 automatic stations serves a 300-mile stretch of coastline

that is noted for its treachery. Now a Sikorsky S-62A helicopter has been brought in to help in the never-ending struggle to keep the system working smoothly as required by the heavy volume of coastal traffic. It complements the service previously provided solely by Canadian Coast Guard vessels, which handle the transportation of major supply items to the manned stations and service the automatic stations. The trouble with sea transport is that it is slow especially when there are high winds and seas to batter through.

With the exception of the helicopter, all other forms of transportation are out of the question because there are virtually no roads or rail lines running up the British Columbia coast. Conventional air transport is of limited value because there are few places on the coast flat enough for a landing strip. The northern most coastal airport is at Prince Rupert whose mile-long runway was cut out of rock and muskeg at an estimated cost of \$7 million. It ranks as one of the most expensive runways in the world. By contrast the helicopter can land virtually anywhere. At many of the stations wooden pads have been built at low cost for its use.

The S-62 which is based at Prince Rupert is held ready to go into action at any time. It has two crews consisting of a pilot and mechanic so that it can be on constant alert. Because helicopter pilotage is more demanding than fixed-wing flying, particularly under the conditions existing in this area, pilots are restricted to six hours of flying daily.

From the point of view of better service and higher morale the helicopter has already proved itself to have been worth the investment of \$350,000. It can carry 1,800 pounds of freight or eleven passengers. It sometimes plays the role of messenger boy with supplies and mail. It facilitates and speeds up transfers of personnel and participates in search and rescue operations. It can deliver a repairman to some remote spot when a station goes out of service.

In December the S-62 performs a very special function: Santa Claus climbs aboard and makes the rounds of the manned stations, for there are children at most of them. Never before was Christmas such an exciting event on the remote islands as it was in 1962, the first year that he was able to drop in by air. On that same trip the S-62 delivered packages ordered by mail by lighthouse families.

The helicopter has been called up to go out to rescue some of its own people. Last spring the keeper on Green Island and his assistant were out in a small boat on a beachcombing expedition. The outboard motor failed 500 feet from home. The men tried to row back but a wind suddenly blew up and quickly reached a velocity of 60 m.p.h. Two horrified wives watched helplessly as their husbands drifted away.

Keeper Milton John Woksi and Assistant Dennis Patterson sat in their 14-foot boat and prayed as 30-foot waves lashed around in pitch darkness.

Luck, however, was on the side of the two men; the boat stayed afloat and eventually beached itself a few miles from Ketchikan, Alaska. All the time crewmen in the helicopter had been trying to penetrate the heavy cloud and fog for a sign of the boat and its helpless occupants.

John Dowdwell, Green Island lightkeeper, and his family watch the arrival of the Sikorsky S-62A.





(Above) Paul Duchritski, one of the pilots of the S-62A helicopter.



(Left) Helicopter mechanic Hans Strolenberg hands over a package of supplies to the light-keeper on Lawyer Island, near Prince Rupert.

Back at the lighthouse the two wives were certain that they had witnessed their entry into widowhood but in the best "show must go on" tradition stayed up all night to tend the light. When it was eventually known that the men were safe in Alaska the helicopter flew north to pick them up and return them to their island home.

Green Island light rates a two-man crew because of its key location and other factors.

It takes a special type of person to be a member of a lighthouse family. The loneliness of the job would drive most people crazy. To others it is a welcome escape from the hustle and bustle of city life. The chief keeper on Green Island at present is James Dowdwell. He and wife Mildred are both Nova Scotians who enjoy the rugged lonely life. They have a four-year-old daughter and a son aged 17 months.

For Dowdwell the introduction of the helicopter has been a great comfort. He knows he can get help in a hurry now if one of the children becomes sick or a member of the family is involved in an accident. It also brings in mail between the regular visits of the tender CCGS Alexander MacKenzie, a feature that will help a lot when the children reach school age and get their schooling by mail—a service of British Columbia's Department of Education. Prince Rupert is 40 miles south of Green Island. With the helicopter in service, the Dowdwell family feels that it is now living in the suburbs in comparison with the conditions that existed before the introduction of the helicopter.

In terms of mileage and weather conditions the station at Cape St. James is even tougher. This is located on the southern tip of the Queen Charlotte Islands where the notorious Hectae Straits separate the Charlottes from Vancouver Island. Winds of 120 m.p.h. are not uncommon at this installation, which consists of an automatic lighthouse and strategic weather recording station. Its distance from Prince Rupert is about 150 miles.

The helicopter, of course, cannot operate when conditions are at their worst at Cape St. James. However, it did recently

stage an outstanding performance by making a brief landing in gale winds which at times reached 60 m.p.h.

Prior to the arrival of the helicopter, Cape St. James could not count on anything more than quarterly visits from the CCG tender. Now calls can be made at any time on short notice.

The S-62 helicopter is powered by a 1,050 s.h.p. (derated to 730 s.h.p.) General Electric T-58 shaft turbine engine. It is equipped with extra fuel tanks to permit long round trips to spots like Cape St. James. It also has retractable wheels and fixed pontoons and is thus fully amphibious—an important feature in the search and rescue phase of its operations.

Crews are supplied by the flight services division. The pilots flying the S-62 are Don MacLean and Paul Duchritski. Their respective mechanics are Edward Blanchet and Hans Strolenberg. All four have already seen a great deal of action in the short time they have been on the helicopter operation. It is almost certain that they will see a lot more (some tough, some thrilling, some routine) in the years ahead.



John Dowdwell waves as the helicopter departs from Green Island.

Patterson Medal Awarded to D. B. Kennedy

The Patterson Medal for distinguished service in meteorology in Canada has been awarded to D. B. (Des) Kennedy, head of the meteorology and oceanography section at Canadian Forces Headquarters. He received the medal on November 4 from Air Chief Marshal F. R. Miller at a brief ceremony at headquarters. J. R. Noble, director of the meteorological branch attended.

The Patterson Medal honors a former director of the meteorological service of Canada and is given to any resident of Canada for a unique outstanding achievement or for sustained contributions over several years.

Mr. Kennedy, who is seconded to CFHQ from the Department of Transport, has been actively engaged in the organization of meteorological support for the Canadian Armed Forces since early in the Second World War. In the words of the citation that accompanied the award "he



Left to right: Mr. J. R. Noble, Mr. Kennedy and Air Chief Marshal F. R. Miller

has distinguished himself as an interpreter between the civil and military interests in meteorological matters."

During the war years he pioneered meteorological instruction for wartime aircrew, was in charge of the intensive training program to provide meteorological officers for the British Commonwealth Air Training Plan and, later, was engaged in administration of the meteorological offices at the wartime air stations across Canada. In

1946 he was awarded the MBE in recognition of these wartime activities.

Shortly after the war he was appointed to the position of meteorological adviser at air force headquarters and subsequently served as liaison meteorologist and as meteorological adviser to the chairman, chiefs of staff. As such he has been a major contributor to the development of an efficient military meteorological organization.

New Branch Deals With Hydraulics Aspects of Great Lakes and St. Lawrence Transportation

Establishment of a new branch of D.O.T., to deal with matters relating to the provision of navigable channels for water transportation on the Great Lakes and St. Lawrence River, was announced late in November by the minister. D. M. Ripley, former chief of special projects, is director of the new branch.

Formation of the marine hydraulics branch, by bringing together two divisions that formerly were under separate direction, will enable the department to integrate more closely its work in this field. It will bring into single focus the hydraulic and engineering aspects of water transportation from the Lakehead to the sea.

The need for such integration is emphasized by the present problem of water levels in the Great Lakes which affect the whole of this important traffic artery. It is intended that if similar problems arise elsewhere they will be referred to the new branch.

The two divisions concerned are the former special projects division, now to be known as the hydraulics studies division,

and the St. Lawrence Ship Channel division. The former was a part of the economic policy and research branch and the latter was in the marine works branch.

The hydraulics studies division was given its new name to clarify its role. The two divisions will continue to carry out the same programs as in the past. There will still be joint participation of the two in such projects as the St. Lawrence ship channel model studies at Montreal, which are of basic importance to the works program of the ship channel division.

The hydraulic studies division will continue to have its headquarters in Ottawa. Mr. Ripley, will also have his office at departmental headquarters in Ottawa so as to be available, not only for over-all direction of the branch, but for liaison with other government departments and agencies and the International Joint Commission.

The headquarters of the St. Lawrence Ship Channel division will continue to be in Montreal.

Appointed Planning Officer for Canadian Coast Guard College

Commodore Eric Brand, former director of marine operations, has been appointed planning officer of the Canadian Coast Guard College.

Commodore Brand, who retired from the department in 1963, returns to temporary duty in order that preparations for the college may be started without delay, pending the selection and appointment of the director and senior instructional staff.

The Coast Guard College, establishment of which was announced by Mr. Pickersgill last May 5, will be located in the former Point Edward training establishment of the Royal Canadian Navy at Sydney, N.S. Commodore Brand will begin at once to plan the broad organization of the college, including such matters as the conversion of existing buildings to the new requirements, establishing conditions of service and methods of recruiting.

It is expected the college will be in operation next Fall. It will train both deck and engine room officers for service with the Canadian Coast Guard.



Regional Superintendents of Radio Regulations held a conference at headquarters during the week of November 23. Standing, left to right, are: B. S. Harrison, Vancouver; C. M. Williams, Moncton; V. J. R. Brister, Toronto; and T. Foucault, Montreal. Seated: W. A. Caton, controller of radio regulations; F. G. Nixon, director of telecommunications; and H. R. Newcombe, superintendent, radio authorization and enforcement.

Suggestion Award Winners

NAME	POSITION	LOCATION	AMOUNT
James Conway	Air Traffic Controller	Winnipeg	\$15.00
Robert M. Bland	Storeman	Moncton, N.B.	15.00
Basil Latham	Met. Communicator	Halifax	10.00
M. Walter Didiuk	Radio Technician	Winnipeg Aeradio	15.00
Jacob N. Bell	Met. Technician	Victoria, B.C.	15.00
J. T. Hart	Radio Operator	Sarnia, Ont.	20.00
N. Lawrence Stewart	Radio Technician	London, Ont.	25.00
William P. Power	Radio Operator	Burin, Nfld.	15.00
Dennis H. Bodkin	Electronic Technician	Abbotsford, B.C.	15.00 20.00
Steve Kutash	Radar Technician	Edmonton Int. Airport	10.00
Stewart Jackson	Airport Maintenance Foreman	Penticton Airport, B.C.	30.00
L. W. Francis	Storeman	Winnipeg Air Services	10.00
W. G. Bruyn	Electronics Technician	Quebec Airport	15.00
John P. Lumb	Radio Technician	Vancouver	20.00
F. L. Cushing	Meteorological Officer	Esquimalt, B.C.	15.00
Duane A. Entner	Radio Operator	Prince Rupert, B.C.	10.00

Retirements



Thomas Gordon Slinn, (above) a senior radio inspector, at Toronto, retired on October 30 after 38 years with the department.

Born at Ottawa, Mr. Slinn joined the department of marine and fisheries in October, 1926. He began as a junior radio electrician in the newly-formed radio interference section and was assigned to the radio test room in Ottawa. In July, 1927 he left Halifax on the CGS "Stanley" as a member of the Hudson Strait Expedition under Major N. B. McLean and assisted in the establishment of radio stations at Nottingham Island, Wakem Bay and Port

Burwell. Early in 1929 he installed the first marine automatic radio beacon at Cove Island on the Great Lakes.

Mr. Slinn was transferred to Toronto radio regulations office in 1931 and was responsible for all marine radio aids on the Great Lakes. In 1955 he was transferred to air radio aids when marine and air radio aids were combined. In 1956 he transferred back to radio regulations and remained there as senior inspector until retirement.

His colleagues honored him at a well-attended luncheon at which the presentation of a wallet and an automatic coffee percolator was made.

George C. Ventura, (left) a veteran of 29 years of government service, retired in October. He had been an accountant with the radio regulations division since 1946.

Born in Ottawa just before the turn of the century, Mr. Ventura attended both French and English schools in the city. He went on to business college and, as well, took a course in accounting. In October, 1915, he joined the Canadian Army and saw action in England and France (including the Battles of Somme and Vimy Ridge.)

Mr. Ventura was employed by the Grand Trunk and Canadian National railways from 1921 until the mid 30's. In 1935 he joined the former Department of Mines and Geology and after four years transferred to the Post Office Department. In August, 1942, because of his many years experience with the railroad, he was asked to transfer to the Department of Transport's lease land division. After the war he joined the radio regulations division and remained there until his retirement.

Days of retirement will be active ones for Mr. Ventura, who has four married sons and daughter and 12 grandchildren.



Robert J. Wooley, (above) assistant manager at Toronto Regional Real Estate office, retired early in December.

Mr. Wooley, who joined the Toronto office as an agent in 1954, was involved in the acquisition of lands for the expansion of airports at Toronto-Malton, Windsor and Winnipeg, as well as the appraisal of properties on Ontario harbors and on the Rideau Canal.

Before joining the department, Mr. Wooley was in real estate in the Toronto area. He is a fully qualified member of the American Institute of Real Estate Appraisers and an accredited member of the Appraisal Institute of Canada and has served for several years as a committee chairman. As well, he is now a member of the Institute's Governing Council.

Shelborne (Shad) A. Shatford, radio inspector at Edmonton, retired on November 1 with a record of service dating back to 1923.

Mr. Shatford had been in ill health for several months prior to his retirement so attendance at the gathering held to mark his retirement was limited. A few members of the regional radio regulations staff, along with G. E. McDowell, acting regional director of air services, extended best wishes and the gift of a portable typewriter from his friends and fellow employees.

A native of British Columbia, Mr. Shatford was first employed as a radio operator on the lighthouse tender "Newington" in 1923. He subsequently served at radio stations at Prince Rupert, Digby Island, Gonzales Hill, Alert Bay and Point Grey. While at Digby Island he had the distinction of making the first high frequency contact with Sydney, Australia.

In 1937 Mr. Shatford transferred to the air services branch of the then year-old Department of Transport and served at Penhold and Calgary radio ranges. He became a radio inspector in 1949 and served as such at Edmonton until his retirement.





Cross-Canada Photo Coverage



Winnipeg—Robert Murray Smith, 18 months, was a bit too young to be impressed by his nearness to "Beatle" John Lennon. When the aircraft carrying the famed "Beatles" stopped over at Winnipeg last August 18 Robert's grandfather, Airport Manager Jack Smith, held Robert up for John Lennon to pass judgement on the little boy's first haircut. It would appear that John thought the little fellow got sheared.

St. Jovite, Quebec—R. W. Goodwin, director of civil aviation, received the COPA Award for 1964 at the October annual convention of the Canadian Owners and Pilots Association held at Gray Rocks Inn.

Every year COPA presents this award to the person who, in their opinion, contributed most to private and general aviation in Canada during the year.

Mr. Goodwin was considered deserving of this award for his efforts to provide fair regulations for the aviation personnel licensing field. Presentation was made by Max Karant (left), vice-president of the Aircraft Owners and Pilots Association of Washington.



Toronto—The 25th anniversary of the formation of the Canadian Branch of the Royal Meteorological Society was observed by the some 180 Toronto members and guests on November 5. The speaker for the occasion was J. R. N. Noble, director of the meteorological branch, who spoke about "Meteorology in Canada—A Look at the Past and Some Thoughts about the Future."

The Canadian Branch of the Society was formed in August, 1939, with 34 members. Today the membership is about 385, with Centres in Toronto, Montreal and Winnipeg.

The future of meteorology in Canada was presented by Mr. Noble as being one of great expansion in all areas, not only in the government service but also in the schools and universities and, in fact, in all walks of Canadian life.

Head table guests at the anniversary dinner were, left to right: Alec MacVicar, Mrs. D. Holland, Dr. A. Thomson, Mrs. Knox and John Knox, Mr. Noble, Mrs. Noble, Douglas Holland, Mrs. MacVicar and Louis Shenfield.



Lake Superior, Ont.—When the CCGS *Alexander Henry* plowed through a fierce 60 knot November gale during flume stabilizer tests George Burgess, a technical officer with the shipbuilding division at headquarters, was there to record it photographically.

D.O.T. PILOT FATALLY INJURED

WILMORE E. HANSEN, a helicopter pilot at Ottawa Airport, was killed on November 18 when the Bell-J GXZ he was flying crashed a few miles from Ottawa.

On a local training flight, Mr. Hansen was alone in the helicopter at the time of the accident. The cause of the crash is now being studied by the aircraft accident investigation division.

Mr. Hansen, age 43, was born at Red Deer, Alberta. He served with the RCAF in Britain from 1942-1945 and again from 1951-1959. In July, 1961, he joined the Department of Transport as a helicopter pilot. He is survived by his widow Mrs. Dorothy Hansen, and three children.



*Canadian
Coast
Guard*
ALBUM

CCGS LABRADOR

CCGS Labrador—This Canadian Coast Guard icebreaker, completed at the yard of Marine Industries Limited, Sorel, Que. in 1953, was acquired from the Royal Canadian Navy in 1958. She is a veteran of service in the Canadian Arctic and of winter operations in the Gulf of St. Lawrence and Newfoundland waters.

LENGTH: 269 feet

BREADTH: 63 feet, six inches

DRAFT: 29 feet, one inch

POWER: Diesel electric; six 10 cylinder diesel engines with a total of 12,000 brake horsepower, driving two propulsion motors, each developing 5,000 shaft horsepower; twin screw

GROSS TONNAGE: 3,823

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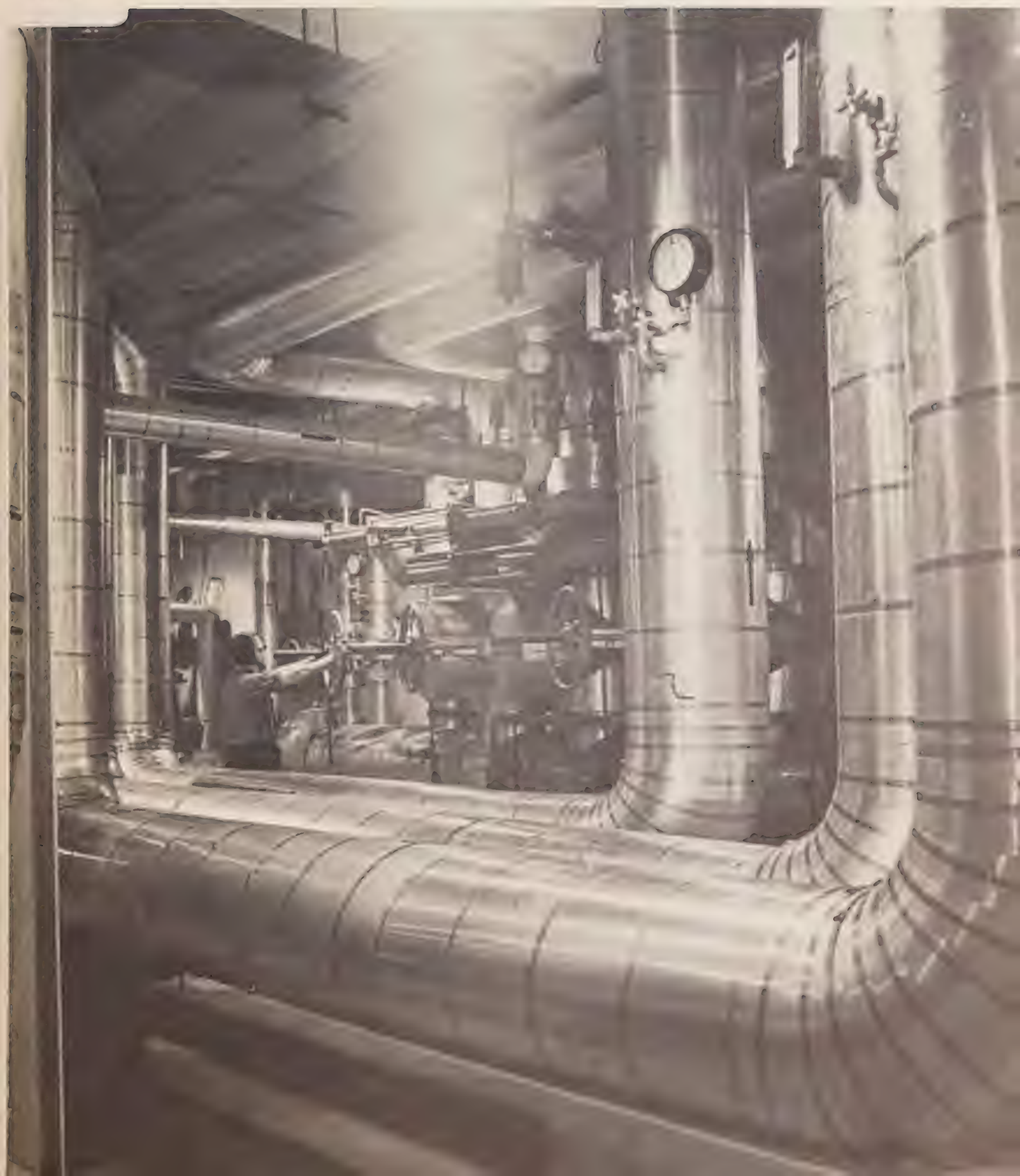
Publications

dot

THE OILMAN CALLS
TWICE A DAY

CANADA'S
LIGHTHOUSES

T15
T61
march/april 1965



VOLUME 16 • NO. 2
MARCH-APRIL 1965 • OTTAWA

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COVER

Aluminum-covered high temperature water lines at Montreal International Airport's central heating plant. See story, "The Oilman Calls Twice A Day", on page 7.

EDITOR

Yvonne McWilliam

NEWS ON THE DOT is a Department of Transport staff magazine published under the authority of the Minister, Hon. J. W. Pickersgill, by the Information Services Division.

In our July/August issue we sent up a trial balloon. Emblazoned on it was a question: Should News on the DOT change its name to the DOT or anything else, for that matter? Now we're wondering if the balloon is still rising or has it burst—experiment a failure?

Only four readers took up our challenge and as luck would have it they split on a name change—50-50.

Perhaps the balloon has burst, but with editorial blindness we'll assume it hasn't and is still rising. More letters like the following would help get us off the hook.

What's in a name?

Well—News On The DOT is rather a lot and a snappier title would simply be DOT.

T. E. APPLETON, Ottawa

What's in a name? Sometimes it matters a great deal.

Your proposal to change the name of our staff magazine is understood, but dropping the first two words of the name does not seem to leave a very attractive title. To me it does not sound something like "TIME", "LIFE" or "LOOK". Just dropping the first word "News", I believe, would leave a more topical caption. Or the word "News" in the present name might be replaced by the word "Views" and the result would sound smooth and familiar.

Working from this idea perhaps "Views of the D.O.T." would be an appropriate name, or even "D.O.T. Views". In fact, I believe I favor this last idea—"D.O.T. Views". It implies glimpses or pictures of happenings to people as well as viewpoints of people in the department, and both features are carried in our staff magazine. Other ideas I would find agreeable would be "Life with D.O.T." or "Looking at DOT".

I hope some of these ideas may be helpful.

R. B. SPANTON, Ottawa

Since you wish an opinion on the name for News on the Dot let me say, I don't like the proposed name, the Dot. To me it conveys nothing.

I would suggest DOT JOURNAL, that then covers the bilingual aspect of the publication. Or if you want, DOT JOURNAL MDT.

GEORGE H. POTTS, Halfmoon Bay, B.C.

I think your idea to change the name of News on the DOT to DOT is great. It does sound more contemporary, as you say.

Also, I would like to congratulate you and your staff for the wonderful job you are doing with the publishing of this very fine magazine. At one time I didn't think the reading worth the trouble of taking the magazine off the shelf. At that time all the magazine appeared to me to be was a 'who's who, or what's doing in Ottawa' periodical, covering very little news in the other provinces, namely the western provinces. But since this time it has come a long way in general appeal, covering all fields and subjects and thus making the magazine very interesting and informative from cover to cover. Also gone are the days when you would see the magazines lying about the office, unopened until such time as the janitor discarded them in the trash can. Now it seems that everyone reads them and will from time to time bring up an article he has read in the course of a conversation. This shows the ever increasing popularity the magazine is gaining.

Once again congratulations on a job being well done.

M. G. JEFFRIES, Ashcroft, B.C.



From the Deputy Minister's Desk

Le mot du sous-ministre

Living with one's neighbours is a situation which applies on a personal, a national, and an international basis. Much of our activity in the department relates to international transportation and communications.

We cannot establish standards and policies entirely by ourselves. If we expect to have our international services enter other countries and be treated fairly there, we in turn must provide similar treatment for services and communications coming from those countries. If all these matters were left to be dealt with by individual pairs of countries, numerous widely varying situations would emerge.

To avoid this, attempts have been made in every field of Department of Transport operations to establish international standards and international policies which are generally acceptable. This is done through international organizations set up specially for this purpose. An active international organization exists in each field of transportation and communications in which the Department of Transport operates, and the department, on behalf of the Government of Canada, has played a big part in the establishment of these organizations and in their continuing work.

In recognition of the importance of international co-operation in all fields, 1965 has been declared International Co-operation Year, and in this issue of "News on the DOT" we pay tribute to the value and the work of these areas of operation.

Les rapports entre voisins existent sur le plan personnel, national et international. Une grande partie de l'activité de notre ministère concerne les transports et communications sur le plan international.

Nous ne pouvons établir des normes et des lignes de conduite qui ne valent que pour nous. Si nous nous attendons que nos services internationaux aient accès à d'autres pays et qu'ils y bénéficient de conditions équitables, nous devons de notre côté assurer le même traitement aux services et communications en provenance de ces pays. Si le règlement de toutes ces questions était laissé aux deux seuls pays en cause, il en résulterait de nombreuses situations fort différentes les unes des autres.

Pour que cela ne se produise pas, on a tenté d'établir, dans chaque secteur des opérations du ministère des Transports, des normes et des lignes de conduite internationales qui peuvent s'appliquer de façon générale. Des organismes internationaux ont été établis spécialement à cette fin. Un organisme international actif existe dans chacun des domaines des transports et communications qui relèvent du ministère des Transports. Ce dernier, au nom du gouvernement du Canada, a joué un rôle important dans l'établissement de ces organismes et dans la poursuite de leur activité.

Pour souligner l'importance de la coopération internationale dans tous les domaines, l'année 1965 a été déclarée année de la coopération internationale. Dans la présente livraison de «NEWS ON THE DOT», nous désirons mettre en évidence l'importance de ces secteurs d'activité et les travaux qui s'y poursuivent.

J. R. Baldwin

Canada's Lighthouses

The history of Canada's lighthouses, filled with tales of adventure, perils of the sea, war and even the ghost from a murder story, dates back to 1733 when the first lighthouse of its kind was built by the French at Louisburg, Nova Scotia.

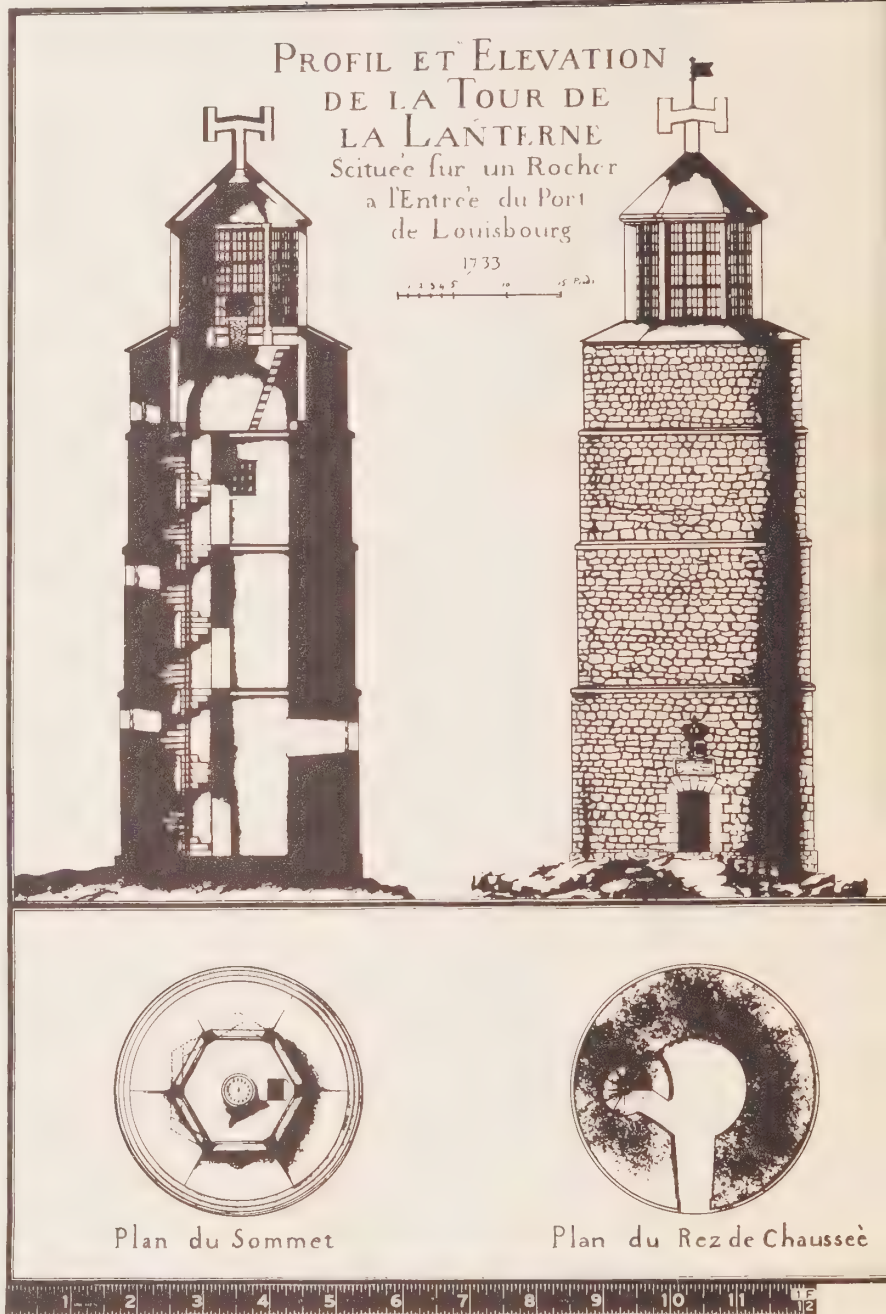
It was a stone tower, 66 feet high, with a blazing circle of oil-fed wicks providing the light. It was also the second lighthouse in North America, the other having been built only a few years earlier at Boston, Mass.

The wooden top of the Louisburg tower fell victim to its own flame and had to be replaced in 1737 by a masonry top. The structure lasted until the second English siege of Louisburg fortress in 1758, when it was damaged and subsequently crumbled into a state of decay. It later was replaced by a wooden tower and this in turn gave way to a concrete tower. Today, more than two centuries later, the construction of a replica of the original tower is planned as a part of the government plan to restore Louisburg as a national historic site.

In 1758 a lighthouse was built on Sambro Island to mark the entrance of Halifax harbor; another was erected at Cape Roseway in 1788 to serve Shelburne harbor. Saint John, N.B. acquired its first lighthouse on Partridge Island in 1791.

In 1816 the first lighthouse on the St. Lawrence River was built at Point Platon on the South Shore, 30 miles above Quebec. The first on Lake Ontario was erected in 1808 at Gibraltar Point marking the entrance to what is now Toronto harbor. The latter is the one that, according to local folk tales, is haunted by the ghost of its first keeper who disappeared and is now believed to have been murdered in 1815.

By 1835 there were 10 lighthouses in the Bay of Fundy, eight on the Atlantic Coast, one in Newfoundland and 10 on the Gulf and River St. Lawrence, including two lightships on Lake St. Peter. By that time there were also four on Lake Ontario and one on Lake Erie. Expanding Great Lakes trade gave rise to construction of a lighthouse on Lake Huron in 1847 and in



1. *Gros Cap lighthouse located in Lake Superior.*
2. *Sand Heads, B.C. lighthouse, a modern design.*
3. *The metal light tower at Trinity, Newfoundland.*
4. *Lighthouse at Race Rock, B.C. is more than 100 years old.*
5. *A traditional light tower at Cap des Rosiers, Quebec.*

From Sea to Sea

by Ken Parks



1872 the first Canadian lighthouse on Lake Superior at Michipicoten Island was erected.

On the Pacific Coast such aids to marine traffic came into being in 1861 at Race Rocks in the Strait of Juan de Fuca and on Fisgard Island at the entrance to Esquimalt harbor. A century later these towers, like many others of early but durable construction, were still in service, though equipped with modern lights and related navigation aids.

Of unusual interest is the lighthouse built in 1842 at Cape Bonavista, Newfoundland. For years the tower housed lights that were brought from Scotland and were reputed in some quarters to have once marked the Inchcape Rock, subject of Robert Southey's famed poem about the Abbot of Aberbrothock, the Inchcape Bell and the scoundrelly Sir Ralph the Rover, who moved the bell and subsequently met his doom on the rock. Today the tower houses a new modern light, the old one stored away to become a museum piece.

Lighthouses in Canada, prior to Confederation, were administered by a variety of authorities including the Trinity Houses of Montreal and Quebec, which had antecedents in Britain; the Commissioners of Public Institutions in New Brunswick and the Board of Works in Nova Scotia. The lighthouse responsibilities of these bodies were transferred to the newly-formed Department of Marine and Fisheries at the time of Confederation.

Since then the establishment of lighthouses and other aids to navigation has kept pace with the expansion of Canada's marine commerce. Today, in sharp contrast with the few crude towers of the 1700s, the Department of Transport's Marine



Works Branch is responsible for nearly 500 manned light stations where sound, radio and light signals require daily attendance. In addition there are more than 4,000 automatic lights of various types serving navigation. All told the department maintains more than 16,000 lighthouses, lights, buoys, beacons and other markers of all types.

Tending lighthouses and other aids to navigation is one of the major tasks carried out by ships of the Canadian Coast Guard. Helicopters based aboard some of the larger ships are used frequently for ship-to-shore transfer of lighthouse personnel and light cargo. This service has speeded up operations considerably, particularly where the approaches by water are difficult and sometimes impossible in times of adverse weather.

At such locations the department has constructed "landing pads" for helicopters to make safe landings possible. Some lighthouses, such as the new "wasp waisted" structure at Prince Shoal in the St. Lawrence River at the mouth of the Saguenay, have a helicopter landing deck incorporated into the design of the tower. The Prince Shoal light is one of the most powerful in North America, with a total light intensity of 48 million candlepower. The light is located in an area of frequent fog conditions and the full intensity of the light is used only when needed in times of poor visibility.

As the older lightstations near the end of their economically useful life they are replaced by new structures of modern design. The installations at lighthouses vary with their location and the traffic they serve. Some have only a light. Some have lights and fog horns; others are also equipped with radio beacons.

Canada's marine lights are to be found from Cape Spear on the easternmost tip of Newfoundland to Iphigenia Point on the northwest shore of Graham Island in the Queen Charlottes, and from Middle Sister Island in Lake Erie to Tuktoyaktuk on the shores of Beaufort Sea, 200 miles north of the Arctic Circle.

As each new night begins, they turn their Cyclops eyes seaward and resume their endless task of blinking out the message that in any language means:

"Sailor, take care!"



The "wasp-waisted" lighthouse at Prince Shoal in the St. Lawrence River.



Sambro Lightship, stationed at the entrance to Halifax harbor.

The Oilman Calls Twice A Day

by Yvonne McWilliam

As another winter draws to an end, the head of the house in many a Canadian home tallies up his heating bill for the year, puts hand to head and bemoans the fact that he didn't emigrate to the "wilds of California or Florida" while he was still young enough to make a go of it.

It took, perhaps, nearly 900 gallons of oil to heat his six-room bungalow this year and it was a comparatively mild winter as Canadian winters go.

How, we wonder, would his heart hold out if he had to greet—and pay—a man delivering 7,000 gallons of oil twice a day, three or four months running? That's what happens at Montreal International Airport.

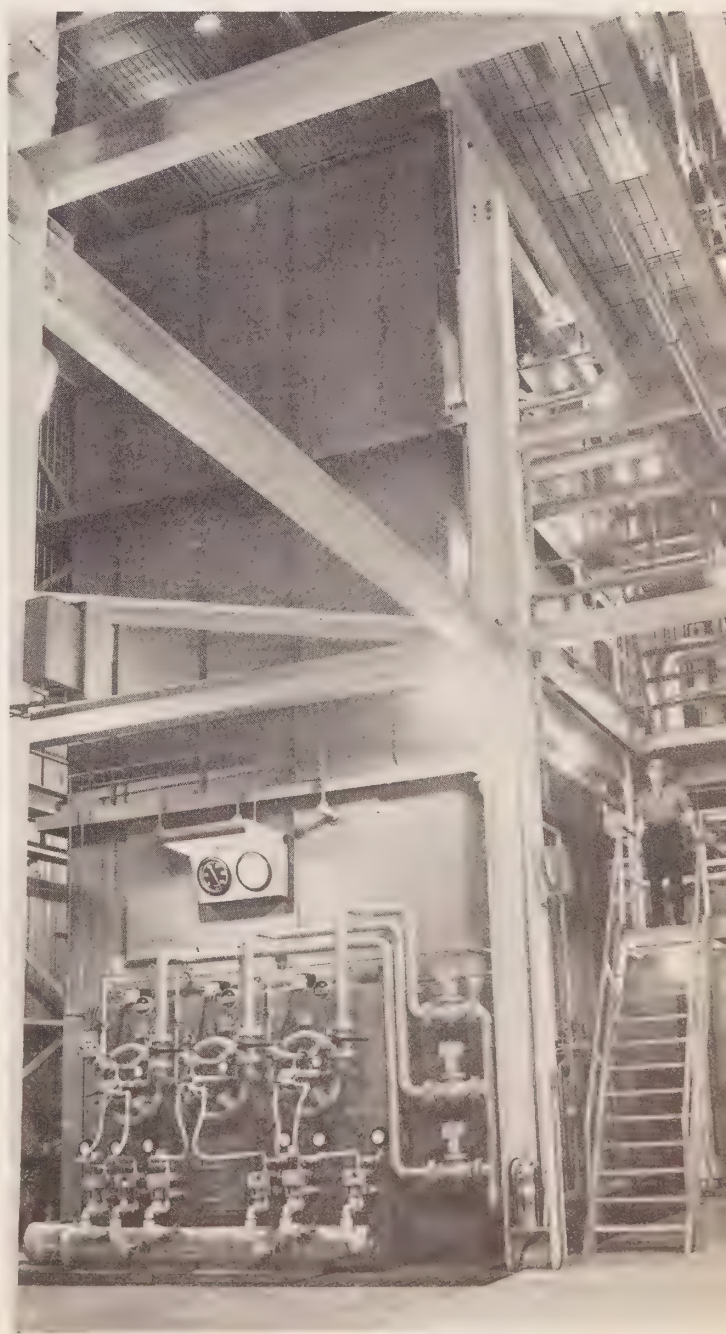
D.O.T.'s central heating plant there gobbles up nearly a million gallons of bunker fuel oil and tops it off with 208,000,000 cubic feet of natural gas every year. It, of course, does so to heat an area equal to five city blocks and to provide hot water and steam for kitchen utilities for the village-like complex and its 3,000-odd employees.

Housed in a separate building and constructed in 1960 at the same time as the terminal, the plant and distribution system cost about \$3,000,000. Then as now, it was the largest of its kind in North America and its high temperature water system included many pioneering innovations. After four years of operation these have proved themselves. So much so, in fact, that the man in charge, Chief Operating Engineer Louis Phillipe Bertrand, says in his 25 years' experience with heating plants he has never before seen one operate to within a hair's breadth of maximum efficiency as this one does.

So efficient is the plant that every year an average of 500 engineers and architects from all over the world come to see it in operation.

The consulting engineers, Wiggs, Walford, Frost and Lindsay of Montreal, were given the task of designing a plant to serve the terminal and other government buildings. Asked to maintain the aesthetics of the overall terminal design and not create a hazard to air navigation with either high smoke stacks or smoke contamination, they proposed a central heating plant large enough to produce heat, not only for the government buildings, but to sell to owners of private buildings at the airport should they want to buy. As it has turned out, the system has expanded to serve more private users each year reducing D.O.T.'s heating bill to only slightly more than the cost of the fuel. Revenue takes care of salaries, operating costs and so forth.

This view of No. 4 generator, a 70,000,000 BTU unit, gives an idea of its immense size. Stationary Engineer A. Le Brasseur comes down from the upper level, where the induced draft fans, de-aerator and make-up tanks are located, to check the individual burners, fuel oil and gas lines seen at the front of the generator.



Designed to operate 24 hours a day, 365 days a year the plant has done so except when shut down for additions and alterations in the summer of 1964. At that time Mr. Bertrand inspected the inside of most of the system's pressure points and was delighted to find their condition excellent—no corrosion, no pitting or damage of any kind. An auxiliary diesel electric plant is operated one hour each week to ensure that it would be capable of assuming the full load in case of emergency.

It takes a staff of 25 men working five shifts to man the maze of boilers, generators, pumps, control panels and assorted other equipment, including four separate oil-fired boiler plants and all evaporators for steam production located throughout the distribution system.

The four high temperature water generators have the capacity to produce a total continuous output of 220,000,000 BTU's (one British Thermal Unit is the amount of heat required to raise one pound of water one degree Fahrenheit). When you realize that 50,000 BTU's will heat the average six-room bungalow, you can appreciate that the amount of heat being produced at the Montreal plant is enormous. In fact, it's enough to heat some 2,500 average-sized homes.

Located several hundred yards from the terminal building, the plant is quite close to the next largest user area, the administration and industrial building. Heat is distributed through a mile of underground tunnels, which wind back and forth to allow for smooth, quiet and economical expansion of the pipes. Some 120,000 gallons of water circulate through the system at a

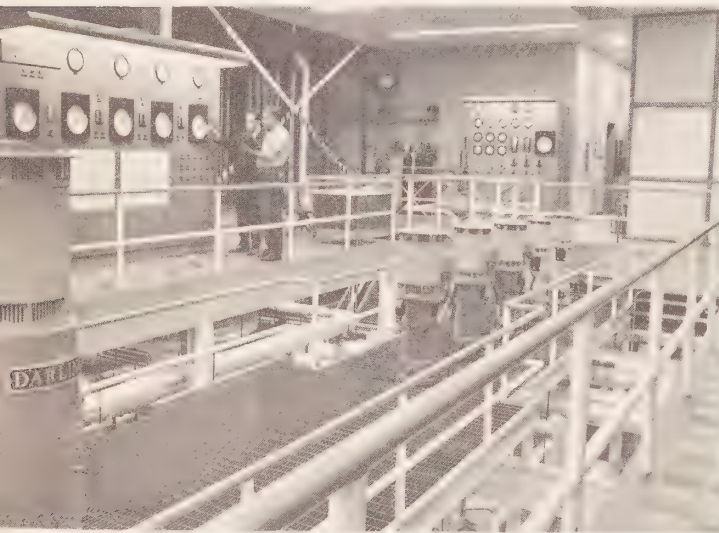
temperature of 400 degrees Fahrenheit. A layman's first thought is how come if water boils at 212 degrees F. at sea level it doesn't turn to steam in this system? In a high temperature hot water system, water is heated and maintained under sufficient pressure to prevent it from boiling and turning to steam. The whole system is pressurized either with steam or an inert gas such as nitrogen.

Both bunker oil and gas are used in the burners, depending on which is more economical at any given time. Switching from one fuel to another is done often several times a day.

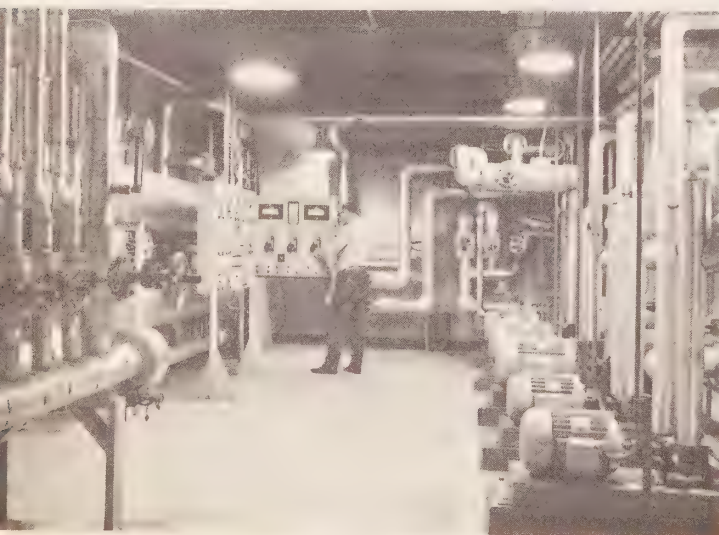
Testing the water in the system and treating it with the proper chemicals is, perhaps, one of the most important preventive measures taken by the staff to ensure efficiency of the equipment. All water goes through de-alkalizers, softeners and, if necessary, a de-aerator. It is tested once during every shift.

As in all things, though, there are times when in spite of everything, something goes wrong. A classic example of this is recalled with some amusement by Mr. Bertrand. When the plant first went into operation he noticed a forced draft fan was very noisy. Investigating, he located a fair-sized hole inside of which was found a real honest-to-goodness "monkey wrench in the works." However, constant vigilance by the entire central heating plant staff keeps the equipment in A.1 shape.

During off-winter months when heating operations are not so time-consuming, part of the 25-man staff busy themselves with maintaining the refrigeration equipment for the airport's various air conditioning systems.

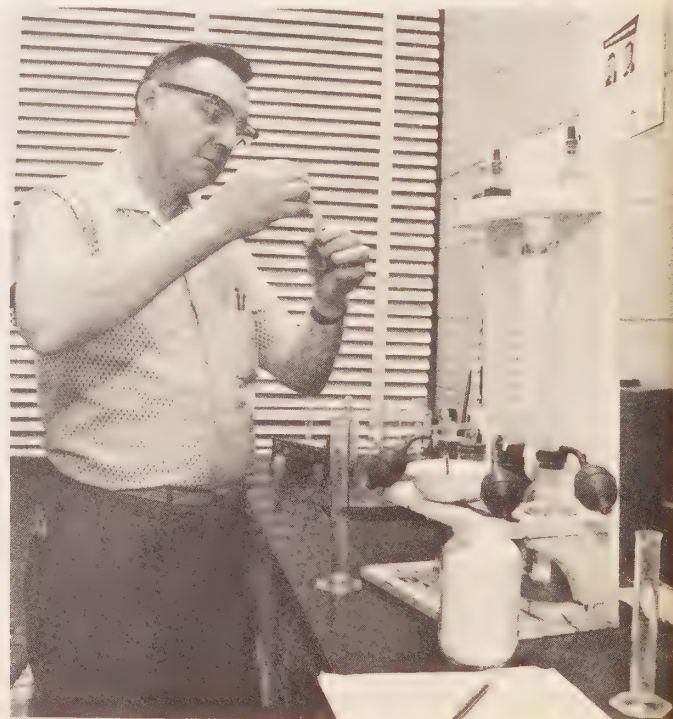


Top left: Chief Operating Engineer Louis P. Bertrand and Shift Supervisor A. Morrow discuss temperature differential of No. 4 circuit on main distribution panel. Here, water flow, BTU load and temperature differential to each circuit may be observed.



Bottom Left: Mr. Morrow checks fuel oil level in No. 2 reserve tank. This view of fuel oil pump room shows the intricate pipe work necessary to this type of heating system where uninterrupted operation is so essential.

Bottom Right: Proper chemical concentration in high temperature and evaporator feed water is strictly controlled. Daily water test in plant lab is made by Shift Supervisor Morrow.





Fishing Vessels Have A Friend In Gander Weather Office

by Frank Roe, *Officer-in-charge,*
Torbay Meteorological Observing Station

Scant hours after the weather office at Gander International Airport issues a hurricane warning, the port of St. John's prepares for a friendly invasion.

From a vantage spot on Signal Hill, where Marconi received the first wireless signals from across the ocean, the flotilla of 150-odd vessels can be seen looming on the horizon. Heading for harbor with the hurricane on their heels, they include the ships of the famed Portuguese fishing fleet. The hurricane's name might be Cleo or Dora or Ethel, but the men of the Grand Banks fishing fleet don't want to be introduced to her. In late summer or early fall hurricanes force the fleet to head for St. John's harbor as often as three or four times a season.

Many nations fish the Grand Banks throughout the year, but the Portuguese probably have the greatest number of vessels in the area.

Seventy ships sail each year from Portugal, accompanied by their modern trim-looking hospital ship the "Gil Eannes". Their crews, along with those of Spanish and French fishing vessels, are a familiar and welcome sight to the citizens of St. John's. Their white-hulled fleet, which combines both steam and sail, is perhaps the last of its kind in the world and many people go to the waterfront to take photos of it.

This year for the first time marine area forecasts issued by the Gander weather office were broadcast in Portuguese by the CBC

at St. John's. As well, the "Gil Eannes" maintains an active liaison with D.O.T.'s meteorological service by taking and transmitting weather observations regularly.





International Co-operation Year — 1965

"The world depends on co-operation and not on conflict. . . ."

With these words of the late Prime Minister Nehru of India in mind, the United Nations has designated 1965 as International Co-operation Year. The move aims to emphasize the extensive areas of global co-operation that now exist and to encourage groups and organizations never before involved to initiate international activities.

The idea of a year of international co-operation was first advanced by Nehru at the UN in 1961. His proposal was to devote a year "not to speeches about peace, but to the furtherance of co-operative activities in all fields."

He continued; "We live in this world of conflicts and yet the world goes on, undoubtedly because of the co-operation of nations and individuals. Little is known, or little said, about this co-operation. . . . so the conflicts go on and we live on the verge of disaster. Perhaps it would be a truer picture if the co-operation elements in the world today were put forward."

The fact is, international co-operation has worked and will work. It is fitting that 1965, the 20th anniversary of the United Nations, should be chosen to throw a spotlight on it.

The United Nations is providing the impetus, but it is up to member nations to make the most of the unique ICY opportunity.

Canada has been closely associated with preparations for ICY since its inception—the UN resolution calling for the designating of 1965 as ICY was co-sponsored by India and Canada—and a public information and education campaign has been launched to familiarize Canadians with the ICY concept.

Many projects are proposed for the year. They range from those implemented by international authorities, national governments and municipal councils to those which will be participated in by Canadians in private or industrial organizations or as individuals. For instance, one committee has been active on international road signs and driving licences; several committees are collecting used tools and electronic equipment for shipment to developing countries; Canadian schools are "twinning" with schools in other nations and a two-way exchange of books and school material has begun; the Voice of Women has arranged a tour of Canada for a delegation of Soviet Union women; the B.C. Credit Union is fostering a community development program in association with the University of British Columbia's project in Rajasthan, India; the Post Office Department issued a special Canadian ICY stamp in March.

And, of course, each specialized agency of the United Nations, whose very existence is based on international co-operation, is

gearing its 1965 program to the ICY theme. These agencies include the World Health Organization (WHO), the World Meteorological Organization (WMO), the International Telecommunication Union (ITU), the Food and Agriculture Organization (FAO), World University Service (WUS), Save the Children Fund and many others.

The Department of Transport is represented in several of these agencies—WMO, ITU and the Intergovernmental Maritime Consultative Organization (IMCO), to mention but three—and is directly concerned with their activities during this year of international co-operation.

World Meteorological Organization

The old adage that everyone talks about the weather but no one does anything about it is no longer true. Weather is being harnessed to man's needs in many places on earth, thanks largely to the efforts of the World Meteorological Organization (WMO) of which Canada is a member.

A specialized agency of the United Nations, the WMO has been in existence since 1951 and has some 125 member states.

With its headquarters in Geneva, Switzerland, it standardizes meteorological activities throughout the world and acts as a tie between national weather services such as D.O.T.'s meteorological branch.

An important aspect of the organization's work is the development of a world weather watch. It will include an increased world-wide network of observing stations and a weather satellite system.

The WMO also boosts research, observations from ships at sea, the international exchange of weather reports and programs of water resource development.

Of the eight technical commissions of WMO, two are headed by Canadians. C. C. Bougner, chief of climatology, was elected president of the WMO commission for climatology, while Keith T. McLeod, superintendent of public weather services, was elected president of the WMO commission for maritime meteorology. Election of Canadians to these two important posts demonstrates Canada's leadership in international meteorology and the high regard in which Canadian meteorologists are held by their fellow scientists.

On March 23 Canada joined other member states in officially observing World Meteorological Day. The theme for this year's observance was Tropical Meteorology and throughout the year,

to coincide with ICY, the WMO will make special efforts in the field of meteorology in Africa.

International Telecommunications Union

"Telecommunications span the world. Yet, although they easily traverse vast distances and physical obstacles, they often have difficulty when it comes to crossing the man-made frontiers between." So says the International Telecommunication Union's pamphlet published this year to mark the union's 100th anniversary.

In 1849 the first telegraph was used internationally; in 1876 the telephone was invented, and then, towards the close of the 19th century, radio. Each new communication medium required international organization.

Today, more and more people merely lift a telephone receiver and call another country or turn a knob and listen to a foreign radio program. This is possible through the co-operation of the countries concerned which has been achieved through their membership in ITU.

With the reality of communication through space, international agreement is more important than ever.

The ITU is the oldest of intergovernmental organizations which have become specialized agencies of the United Nations. It was born in 1865 when the spread of the telegraph made it necessary to reach agreement on the technical system to be used, on uniform methods of handling messages, on the collection of charges.

First came bilateral understanding between regional groups of countries, ending in an inter-European association. Other European countries were drawn in and a truly international organization came into being in Paris on May 17, 1865. Called the International Telegraph Convention, member countries agreed to a set of basic telegraph service regulations.

International telephone service came much later and its progress was much slower. It was not until 1927, when radio provided the means to carry the human voice from continent to continent, that this service became world-wide. In 1932 the union was renamed the International Telecommunication Union.

The number of members is ever increasing as new countries gain their independence. Today, the ITU roster numbers 124 member countries and 2 associate members. The list includes such new African states as the Republic of Dahomey, the Islamic Republic of Mauritania, the Republic of Chad, the Kingdom of Burundi and many others.

The members of the ITU meet at intervals of normally not less than five years at a plenipotentiary conference. This is the supreme authority of the ITU itself and lays down general policy. It reviews the union's work since the last conference and revises the convention if necessary. As well, the plenipotentiary conference elects the Secretary-General and the Deputy Secretary-General, who hold office until the following conference. The plenipotentiary conference also chooses the 25 members who are to serve on the administrative council.

Canada has been a member of this council since its inception in 1948 and at the last plenipotentiary conference in Geneva in 1959 was re-elected. The council meets annually to supervise the administrative functions and co-ordinate the activities of the four permanent organs of the ITU—the general secretariat, the international frequency registration board, the international radio consultative committee and the international telegraph and telephone consultative committee.

Decisions adopted at plenipotentiary and administrative conferences govern the use of telecommunications throughout the world.

This year the plenipotentiary conference has been scheduled to coincide with the union's 100th anniversary. It will be held at Montreux, Switzerland.

Inter-Governmental Maritime Consultative Organization

Created in 1958 as a specialized agency of the United Nations IMCO, as it is known, is mainly concerned with shipping engaged in international commerce. Since more passengers and freight are carried by ships than any other means of transport, this is a most important field.

The organization's 21 members include not only the traditional maritime countries, but also those which rely largely on the shipping services of other nations. Its functions are consultative and advisory—to achieve the highest practicable standards of maritime safety and efficient navigation, with a special responsibility for the safety of life at sea. As well, IMCO provides for the wide exchange of information between nations on all technical maritime subjects, the prevention of pollution of the sea by oil and the unification of regulations for the tonnage measurements of ships.

Another purpose is to discourage discriminatory, unfair and restrictive practices affecting ships in international trade, so as to promote the freest possible availability of shipping services to meet the needs of the world for overseas transport.

There are four main bodies in IMCO: the assembly, the council, the maritime safety committee and the secretariat.

The assembly, consisting of delegates from all member states, elects the IMCO council, chooses the secretary-general, approves financial and staff regulations and determines policies and work.

The council of 16 members (which will be increased to 18 within two years) meets as often as necessary, normally twice a year, and between sessions of the assembly performs all functions of IMCO. Among other things it appoints, with assembly approval, the secretary-general.

The maritime safety committee consists of 14 members from the countries having an important interest in maritime safety of which not less than eight must be the largest ship-owning nations. Members are elected for a four-year term. Canada is a member of the council and the safety committee.

The secretariat is composed of the secretary-general, the secretary of the maritime safety committee on a number of international civil servants. Its headquarters are in London, England, where this spring the conference on the facilitation of international travel and transport will be held.

ITU headquarters, Geneva, Switzerland.





No matter the weather, Montreal runways are

Open for business 24 hours a day

With air travel no longer a luxury but a necessity to modern business, today's airports must operate round-the-clock, round-the-year. Canada, along with other northern countries, spends long hours during winter months fighting a major enemy to keep the planes a-flyin'.

In 1962 nearly 3,000,000 tons of snow was cleared from the runways, aprons, parking lots and surrounding area at Montreal International Airport alone.

Although there are other cities in the world as large as Montreal at the same latitude or higher, none of them has the peculiar combination of circumstances which makes its battle with snow such a gigantic task.

Montreal lies in the snowbelt of the St. Lawrence River and Ottawa River valleys. Weather systems which gather moisture along the eastern seaboard of the United States or across the expanse of Hudson Bay often swing across Montreal because of opposing low pressure areas. A particularly severe clash of systems can bring as much as 24 inches of snow to the area within a matter of hours. Yet, because of the efficiency of the department's snow removal corps at Montreal International Airport, the runways are open at all times—even when vehicular traffic has come to a virtual standstill on city streets.

Many of the foreign airlines that use Montreal facilities for passenger and cargo handling have written to Montreal Airport Manager Pete Goulet complimenting him on the excellent snow removal techniques used to keep the runways clear.

Snow removal is imperative to safety, but heavy traffic at large airports makes it difficult to find time for it. On peak days

at Montreal, for instance, planes land and take-off at the rate of one a minute from morning to night. Friday, is usually the busiest day of the week and as everyone knows it always snows on Fridays!

D.O.T. snowblowers and sweepers are usually standing by waiting for the first break in traffic to get at the job of cleaning the runways. It's pretty costly to make a four-engined jetliner wait in the air until the runway is cleared—a 20-minute delay means burning hundreds of dollars worth of fuel.

As soon as a half inch of the white stuff accumulates on the runways an army of snow removal men and equipment is out cleaning it away. It takes about 40 minutes to clear one inch of snow using a convoy of plows followed by steel-bristle sweepers. The trucks can plow at 30 or 35 miles per hour but the brooms are most effective pulled at a speed of 15 or 18 miles per hour. This combination produces the perfectly "black" surface essential to jet operations.

Modern airliners reach a ground speed of close to 150 miles per hour just before take-off and after touching down. If the runway surface is slippery, their nosewheel steering is difficult to control.

Slush in particular can be a problem. If it splashes on the undercarriage, it could freeze up and cause the landing gear to lock. Also, it can pile up in front of the wheels and act as a brake. Since wet snow is very heavy it decidedly changes the take-off characteristics of a jet. So much so, in fact, that if there is a half inch of slush on the runway a heavy passenger jet is not



A convoy of plows and sweepers clean off Montreal's No. 24R runway, while aircraft land and take-off on a parallel one.

allowed to take off fully loaded. An inch or more grounds the jet, loaded or not.

Raoul Plourde, the man in charge of field maintenance operations at Montreal Airport, commands a crew of 85 men and 50 major pieces of equipment—snow-blowers, plows, sweepers, graders, loaders, bulldozers and three-ton trucks. The men, 45 permanent D.O.T. employees and 40 seasonal, normally operate on two eight-hour shifts, but in cases of severe storms each shift works an additional three hours. They have enough to do to keep the runways, taxi-ways, and aprons clean so other snow clearance jobs at the airport are let out on contract.

One of the worst storms Mr. Plourde can recall during his three years with the department was in 1963 when 14 inches of snow fell in a 10-hour period. That entire winter was a bad one—121.9 inches of snow fell, some 24 inches more than the average winter's nine feet, and each piece of the airport's snow removal equipment operated an average of 700 to 800 hours compared to the usual 450 to 600 hours.

Although he's been supervising snow clearance for D.O.T. only three years, Mr. Plourde's experience with the white powder goes back much farther. As a general contractor in Chicoutimi

for 25 years he held contracts to clear a 150-mile stretch of northern Quebec highway.

"I'll take runway clearing any day. If the equipment breaks down it's a simple matter to haul it the short distance to the well-equipped maintenance garage at the airport. On a northern highway, though", he says, "half-way to nowhere, a breakdown can be much more serious and uncomfortable."

This winter has been a comparatively easy one with only 40 inches of snow up to February 1. However, until April rains replace the snow Mr. Plourde and his hardworking staff won't heave any premature sighs of relief. Often their hardest work comes in March when the weather is not as cold and the type of snow is wet and heavy, easily compacting on the runways. Then it can be as heavy as sand to remove.

From April to November the field maintenance staff turn their efforts to other things. There are runways to repair, drainage ditches, manholes and catch basins to clean and grassy areas to keep free of weeds and brush.

Mr. Plourde, a big man with a soft voice and sparkling blue eyes, has one ambition—to make Montreal the nicest airport in the world by 1967. "With so many people coming to Montreal that year, our airport must be the very finest."

Raoul Plourde, field maintenance supervisor, frequently goes out on the runways to check on conditions after a storm and direct the crews manning the heavy snow removal equipment.



1965 —

Année de la Coopération Internationale

«L'avenir de l'humanité est fondé sur la coopération et non sur la discorde. . . »

A la lumière de ces paroles de feu le Premier ministre de l'Inde, M. Nehru, l'Organisation des Nations Unies a décidé que 1965 serait l'Année de la coopération internationale. Elle désire ainsi souligner la coopération internationale qui existe à l'heure actuelle dans de nombreux domaines et stimuler les groupements et les organisations, qui ne s'y sont pas encore intéressés jusqu'ici, à promouvoir certaines initiatives sur le plan international.

L'idée d'instituer une Année de coopération internationale a été préconisée pour la première fois par M. Nehru aux Nations Unies en 1961. Il proposait de consacrer une année «non à discourir sur la paix, mais à promouvoir la coopération dans tous les domaines».

M. Nehru poursuivit ainsi son discours: «Nous vivons dans un monde où se produisent de nombreux conflits et, malgré tout, le monde continue d'exister, sans doute grâce à la coopération des nations et des individus. Cette collaboration est bien peu connue et on en parle fort peu. . . de sorte que les conflits subsistent et que nous vivons au seuil du désastre. On aurait peut-être une idée plus juste de la situation si on soulignait davantage la coopération qui se manifeste aujourd'hui dans le monde».

En réalité, la coopération internationale a produit des fruits et elle en produira encore. Il convient qu'on choisisse l'année 1965, vingtième anniversaire des Nations Unies, pour la faire mieux connaître.

Ce sont les Nations Unies qui assurent l'élan nécessaire, mais il revient aux nations membres de bénéficier au maximum des avantages qu'offre cette Année de la coopération internationale.

Le Canada s'est intéressé étroitement aux préparatifs de l'Année de la coopération internationale. Au tout début, il a présenté, de concert avec l'Inde, la résolution des Nations Unies visant à désigner l'année 1965 comme année de la coopération internationale, puis il a lancé une campagne pour renseigner et instruire les Canadiens et leur faire connaître cette idée.

On prévoit au cours de l'année la réalisation de plusieurs projets par les autorités internationales, les gouvernements nationaux, les conseils municipaux, et des projets auxquels participeront les Canadiens au sein de groupements privés ou d'entreprises industrielles ou à titre personnel. Par exemple, un comité s'intéresse particulièrement à l'établissement de la

signalisation routière et des permis de conduire internationaux; divers comités recueillent des outils et du matériel électronique usagés en vue de les expédier aux pays en voie de développement; les écoles canadiennes se jumellent avec des écoles d'autres pays et ont commencé à s'échanger réciproquement des livres et des fournitures scolaires; la Voix des Femmes a organisé une tournée du Canada par une délégation de femmes de l'Union Soviétique; la Credit Union de la Colombie-Britannique est à réaliser un programme de développement communautaire dans le cadre de l'oeuvre poursuivie par l'Université de Colombie-Britannique à Rajasthan, en Inde; le ministère des Postes a émis en mars un timbre canadien spécial pour commémorer l'Année de la coopération internationale.

En outre, comme il se doit, chaque institution spécialisée des Nations Unies qui, de par sa nature même, doit favoriser la coopération internationale, organise son programme pour 1965 d'après le thème de l'Année de la coopération internationale. Ces institutions comprennent l'Organisation mondiale de la santé (OMS), l'Organisation météorologique mondiale (OMM), l'Union internationale des télécommunications (UIT), l'Organisation des Nations Unies pour l'alimentation et l'agriculture (FAO), l'Entraide universitaire mondiale (WUS), le Fonds de secours à l'enfance, et plusieurs autres.

Le ministère des Transports a des représentants au sein de plusieurs de ces institutions, l'OMM, l'UIT et l'Organisation intergouvernementale consultative de la navigation maritime (IMCO), pour n'en mentionner que trois, et il participe directement aux initiatives de ces organismes durant cette Année de la coopération internationale.

L'Organisation météorologique mondiale

Le vieil adage selon lequel tout le monde parle du temps mais personne ne s'en occupe, n'est plus vrai. On modifie le temps en fonction des besoins de l'homme à plusieurs endroits du globe, grâce surtout aux efforts de l'Organisation météorologique mondiale (OMM) dont le Canada fait partie.

L'OMM, qui est une institution spécialisée des Nations Unies, existe depuis 1951 et compte environ 125 États membres.

Son siège social est à Genève (Suisse). Elle normalise les initiatives météorologiques dans le monde entier et entretient la liaison entre les services météorologiques nationaux comme la Direction de la météorologie du ministère des Transports.

L'établissement d'une veille météorologique mondiale constitue un aspect important des travaux de l'Organisation. Celle-ci augmentera le réseau mondial de stations d'observation et établira un système de satellites météorologiques.

L'OMM favorise également les travaux de recherche, les observations effectuées par des navires en mer, l'échange sur le plan international de messages météorologiques et la réalisation de programmes d'aménagement des ressources hydrauliques.

Deux des huit commissions techniques de l'OMM sont dirigées par des Canadiens. M. C. C. Bougner, chef de la Division de la climatologie, a été élu président de la Commission de climatologie de l'OMM, tandis que M. Keith T. McLeod, surintendant des services météorologiques publics, a été élu président de la Commission de météorologie maritime. Le fait que des Canadiens aient été élus à ces deux postes importants démontre que le Canada joue un rôle de premier plan dans le

domaine de la météorologie internationale et que les savants des autres pays tiennent les météorologistes canadiens en très haute estime. Le 23 mars, le Canada et les autres membres ont observé officiellement la Journée météorologique mondiale. Le thème choisi pour cette année est celui de la météorologie tropicale. Au cours de l'année, dans le cadre de l'Année de la coopération internationale, l'OMM favorisera la réalisation en Afrique d'initiatives particulières dans le domaine de la météorologie.

L'Union internationale des télécommunications

«Les réseaux de télécommunications encerclent le globe. Toutefois, bien qu'ils franchissent facilement de longues distances et surmontent de nombreux obstacles topographiques, ils éprouvent souvent des difficultés à franchir les frontières artificielles entre chaque pays.» Le passage qui précède est extrait de la brochure publiée cette année par l'Union internationale des télécommunications en vue de commémorer le centième anniversaire de l'établissement de l'UIT.

C'est en 1849 que le premier télégraphe a été utilisé sur le plan international; le téléphone a été inventé en 1876, puis la radio vers la fin du dix-neuvième siècle. L'implantation de chaque nouveau moyen de communication a dû être organisée sur le plan international.

De nos jours, un nombre de plus en plus grand de personnes n'ont qu'à décrocher le récepteur et acheminer un appel vers un autre pays ou tourner un bouton et écouter une émission radiophonique en provenance d'un pays étranger. Ceci est possible grâce à la coopération des pays en cause qui sont membres de l'UIT.

Maintenant que les communications à travers l'espace sont devenues une réalité, la coopération internationale s'impose de plus en plus.

L'UIT est la plus ancienne des institutions intergouvernementales qui sont devenues des institutions spécialisées des Nations Unies. Elle a été établie en 1865 alors que, à cause de l'expansion de la télégraphie, il fallait s'entendre sur le système technique qui devait être utilisé, sur l'uniformité des méthodes d'acheminement des messages et sur la perception des taxes.

Il y eut d'abord des ententes bilatérales entre des groupes régionaux de pays, qui ont donné naissance à une Association intereuropéenne. D'autres pays d'Europe s'étant joints à l'Association, une organisation vraiment internationale a été formée à Paris le 17 mai 1865, nommément la Convention télégraphique internationale dont les pays membres sont convenus d'observer une série de règlements fondamentaux concernant le service télégraphique.

Le Service téléphonique international a été établi beaucoup plus tard et son évolution a été beaucoup plus lente. Ce n'est qu'en 1927, alors que la radio permettait de transmettre la voix humaine d'un continent à l'autre, que ce service est devenu mondial. En 1932, l'organisation est devenue l'Union internationale des télécommunications, pour tenir compte de son expansion.

Le nombre des membres de l'Union s'accroît de jour en jour à mesure que de nouveaux pays acquièrent leur indépendance. De nos jours, l'UIT compte 124 pays membres et deux membres associés. Elle comprend notamment les nouveaux États africains de la république de Dahomey, la république islamique de la Mauritanie, la république du Chad, le royaume de Burundi et plusieurs autres.

Les membres de l'UIT se réunissent au moins à tous les cinq ans lors de la Conférence de plénipotentiaires, organisme suprême de l'UIT qui établit la ligne de conduite générale. Elle passe en revue les travaux de l'Union depuis la dernière conférence et revise au besoin la Convention. C'est également au cours de la Conférence de plénipotentiaires que sont élus le secrétaire général et le secrétaire général adjoint, dont le mandat n'expire

qu'à la conférence suivante. On y choisit également les 25 membres qui doivent faire partie du Conseil administratif. Le Canada est membre du Conseil depuis sa fondation en 1948 et a été réélu membre lors de la dernière Conférence de plénipotentiaires tenue en Genève en 1959. Les membres du Conseil se réunissent chaque année en vue de surveiller l'exécution des fonctions administratives et de coordonner les activités des quatre organes permanents de l'UIT, le secrétariat général, le Comité international d'enregistrement des fréquences, le Comité consultatif international des radiocommunications et le Comité consultatif international télégraphique et téléphonique.

Les décisions adoptées lors des Conférences de plénipotentiaires et administratives régissent l'utilisation des télécommunications dans le monde entier. Toutefois, les membres reconnaissent le droit souverain de chaque pays de réglementer ses propres télécommunications.

Cette année, la Conférence de plénipotentiaires coïncidera avec le centenaire de l'Union. Elle se tiendra à Montreux (Suisse).

L'Organisation intergouvernementale consultative de la navigation maritime

Constituée en 1958 à titre d'institution spécialisée des Nations Unies, l'IMCO, ainsi qu'on l'appelle, s'occupe surtout de la navigation maritime internationale. Étant donné qu'un plus grand nombre de passagers et qu'un plus gros volume de marchandises voyagent par navire plutôt que par d'autres moyens de transport, il s'agit là d'un domaine des plus importants.

Les 21 membres de l'Organisation groupent non seulement les pays maritimes traditionnels, mais également ceux qui dépendent dans une grande partie des services de navigation d'autres nations. L'Organisation joue un rôle consultatif qui vise à faire appliquer les normes effectives les plus élevées dans le domaine de la sécurité maritime et de l'efficacité de la navigation, en veillant tout particulièrement à la sauvegarde de la vie humaine en mer. En outre, l'IMCO assure un vaste échange de renseignements entre les nations sur tous les sujets maritimes techniques, la prévention de la pollution des eaux par les hydrocarbures et l'unification des règlements concernant le jaugeage des navires.

Une autre fin qui a été établie par la Convention de l'IMCO mais qui ne constitue pas présentement une de ses activités, consiste à décourager l'emploi de pratiques restrictives injustes à l'égard des navires affectés au commerce international, afin que le plus grand nombre possible de services de navigation puisse être assuré pour répondre aux besoins qui se posent dans le monde dans le domaine du transport transocéanique.

L'IMCO se compose de quatre organes principaux: l'assemblée, le conseil, le comité de la sécurité maritime et le secrétariat.

L'assemblée, formée de délégués des États membres, élit le conseil de l'IMCO, choisit le secrétaire général, approuve les règlements concernant les finances et le personnel et arrête les lignes de conduite et le programme des travaux.

Le conseil, qui compte 16 membres, se réunit aussi souvent qu'il est nécessaire, habituellement deux fois par année, et exécute toutes les tâches de l'IMCO durant les intersessions de l'assemblée. Il nomme entre autres le secrétaire général, sur approbation de l'assemblée.

Le comité de la sécurité maritime comprend 14 membres délégués par les pays pour lesquels la sécurité maritime constitue une question importante, dont au moins huit doivent être les nations possédant le plus grand nombre de navires. Les membres sont élus pour un mandat de quatre ans.

Le secrétariat comprend le secrétaire général, le secrétaire du comité de la sécurité maritime et un certain nombre de fonctionnaires internationaux. Son siège social est à Londres, où aura lieu ce printemps une conférence sur les moyens à prendre pour faciliter les voyages et le transport sur le plan international.

D.O.T. Scholarships Increase in Amount and Number – Will YOU Help Increase Them More?

When the department's scholarship program came into being two years ago, annual interest earned on investments was approximately \$1,200—enough to provide three \$400 scholarships to dependents of D.O.T. personnel. However, the principal has since been increased by the return of additional money from Travelers Insurance Company. The annual rate of interest earned in future years will be approximately \$3,000 and the Board of Trustees has announced an increase in the number and amount of the scholarships awarded in 1965 to five \$500 awards.

To date more than 80 young people from across Canada have made formal application (many more have inquired) for these scholarships. All had marks averaging over 70 per cent. The scholarship committee of the Canadian Universities Foundation, whose job it is to assess each entry on the basis of scholastic standing and personal qualities, complimented the department on the extremely high calibre of the candidates. Unfortunately, financial assistance could be offered to only six girls and boys due to the limitations of the fund.

The scholarship program was set up in 1962 with money donated by employees who had belonged to the department's group insurance plan prior to the introduction of the government's surgical medical insurance plan. Surplus money was returned to the department by the Travelers Insurance Company and contributors to the plan were given the opportunity of receiving a prorated refund or donating it to a scholarship fund. In all, some \$60,000 was donated and a Board of Trustees was set up to administer the fund, comprised of the assistant deputy ministers of air, marine and general, with the director of administration and personnel as chairman.

To be eligible for a D.O.T. scholarship a student must first be a dependent of an active or retired D.O.T. employee. As well he or she must not be in receipt of scholarships valued at more than \$1,000. He can receive \$500 in other awards and the D.O.T. one, or \$500 to \$900 in others and an equally reduced portion of the D.O.T.

scholarship. Since the current cost of university tuition plus books for first year students across Canada averages \$625 to \$750 these scholarships are of real financial value to those earning them.

For the relatively small number of students who attain marks in the 90's many valuable scholarships are available. However, the keen competition for every scholarship dollar available exists among students who have first class marks in the 70's and 80's. Our scholarships are usually sought by students in this group.

With the thought in mind that the more students D.O.T. can give a financial assist to the better, the Board is currently considering the future of the plan. Since the interest rate on the funds invested will be fairly stable over the years ahead, the number and amount of the scholarships will necessarily remain at the 1965 figure of five worth \$500 each unless the principal is increased substantially. For instance, an increase of \$10,000 would provide interest for one additional \$500 scholarship.

It may seem that \$10,000 is a lot of money to raise so one youngster can get started on a university career, but it actually means that one student a year ad infinitum will benefit. Too, when you realize that \$10,000 is less than \$1.00 contributed per employee, it doesn't seem like an impossible amount to aim at.

Members of the Board believe that since many, many Dot'ers generously gave their insurance refunds to establish the program in the initial instance, there is a possibility that others who did not take the opportunity would now be interested in donating through a fund-raising drive. Also there are those who were not insurance subscribers but would like to be identified with the scholarship plan by making a donation.

If you would like to help more D.O.T. youngsters receive financial assistance during their first year at university, why not make a contribution to-day? Make cheques payable to the Chairman, D.O.T. Scholarship Fund and mail to the Director of Administration and Personnel, Department of Transport, Ottawa.

Statement of Annual Interest Revenue and Expenditures of D.O.T. Scholarship Fund

1. Interest Revenue

<i>Date of Purchase</i>	<i>Type of Security</i>	<i>Amount</i>	<i>Int. Rate</i>	<i>Annual Int. Revenue</i>
Dec. 27/62	Prov. of Ont. Bonds (Dec. 1/82).....	\$ 12,500	5½%	\$ 656.25
Dec. 27/62	C.N.R. Bonds (Oct. 1/87).....	12,500	5 %	625.00
Jan. 18/65	Ont. Hydro Bonds (Feb. 1/85).....	35,000	5½%	1,837.50
	Totals.....	\$ 60,000		\$ 3,118.75

Bond Interest received in 1963..... \$1,281.25
 Bond Interest received in 1964..... 1,281.25

Bond Interest will become due in 1965 as follows:

Apr. 1/65—C.N.R. Bonds..... \$ 312.50
 June 1/65—Prov. of Ont. Bonds..... 328.13
 Aug. 1/65—Ont. Hydro Bonds..... 918.75*
 Oct. 1/65—C.N.R. Bonds..... 312.50
 Dec. 1/65—Prov. of Ont. Bonds..... 328.12
 Total..... \$2,200.00*

*In subsequent fiscal years, bond interest will be due in this amount on February 1, as well as August 1, and the total annual interest due on all bonds will be \$3,118.75

2. Administration Expenditures

The expenditures incurred in the administration of the plan for the past two years were as follows:

	1963	1964
Cost of Civil Service Co-op. Membership.....	\$ 5.00	\$
Rental of Safety Deposit Box.....	5.00	5.00
Canadian University Foundation expenses in convening Award Selection Committee.....	73.97	103.93
Honoraria of \$25 each, to Selection Committee Members.....	100.00	100.00
Totals.....	\$183.97	\$208.93

3. Total Value of Scholarships Awarded

Scholarships awarded in the past two years were as follow:

1963—(3 × \$400)..... \$1,200
 1964—(2 × \$400) + (1 × \$200)..... 1,000

4. Cash on Hand at March 31, 1965

Cash Balances presently at the credit of the Scholarship Fund are as follow:

In Bank of Montreal..... \$ 415.88
 In C.S. Co-op..... 650.85
 Total..... \$1,066.73

5. Cash Available for Scholarship Awards in 1965

Estimated amount available for Scholarship Awards, as at August 1, 1965, is \$2,613.88.

Appointed Montreal Regional Director



Maurice Baribeau was appointed regional director of air services at Montreal effective February 1. He had been acting regional controller of civil aviation in the same region since August 1963.

Born at Lac Ste. Marie, Quebec in 1912, Mr. Baribeau was educated there and at Bourget College, Rigaud, Quebec. In 1931 he began his government career with the Dominion Bureau of Statistics in Ottawa.

He left in 1940 to enlist in the RCAF as a pilot and was appointed assistant chief flying instructor of No. 13 elementary training school operated at St. Eugene, Quebec under the Commonwealth Air Training Plan.

Early in 1943 he attended a general reconnaissance course at Summerside, P.E.I. and then went overseas as an operational pilot with 404 squadron. In September 1944 he was shot down and captured and spent nine months as a prisoner of war in East and West Germany.

Mr. Baribeau returned to Canada and accepted a position as chief flying instructor of the Ottawa Flying Club. In 1948 he joined the Department of Transport as a civil aviation inspector in charge of personnel licensing. He was promoted to superintendent of regulations and licensing in 1956 and in that capacity attended a number of meetings of the International Civil Aviation Organization in both Canada and Europe.

Mr. Baribeau was on leave of absence in 1962-63 to attend the annual National Defence College course at Kingston, Ontario, which acquaints senior military and civilian officials with military, economic political and organizational aspects of national security.

Now a resident of Point Claire, Quebec, the new regional director is married and has three sons. He is a charter member of the Rotary Club and a past chairman of the aviation group of the Professional Institute of the Public Service of Canada.

ICAO Training Aid Developed by D.O.T.

Student air traffic controllers in developing nations will soon be using a table top trainer designed by D.O.T. at the request of the International Civil Aviation Organization (ICAO).

The device uses tape-recorded conversations between aircraft captains and controllers in imaginary situations.

Developed in the air services training school at Ottawa International Airport, the trainer relieves instructors of much repetitious drilling and allows each student to learn at his own pace. It is particularly suitable for countries where air traffic control students have a minimum education and must also learn English.

ICAO makes the trainers available at about \$800 a unit. Each unit consists of a stereophonic tape recorder, seven half-hour taped lessons, 24 metal TV tables and 30 student's desk sets.

Each desk set contains a manual with a complete transcript of the tapes in the student's native language, 14 pictorial desk sheets depicting an airport layout plan with typical traffic situations, and three magnets. The magnets, representing aircraft, cling to the metal table and are moved over the layout sheets according to recorded instructions.

The taped lessons are in English—the universal language of air traffic control. They contain the voices of the instructor, several air traffic controllers and a dozen foreign pilots.

Pilots' and controllers' voices are played back through two different loudspeakers, giving a back-and-forth effect. A final touch of realism lies in the voices themselves; the Air France captain speaks with a French accent, the Lufthansa pilot with a German one, and so on.

Later on in the course students can block out the controllers' voices and give the instructions themselves. The seven lessons end with a tape-recorded examination.

The trainer is designed to be used over a period of six to ten weeks, according to each student's progress. However, in a recent test at the D.O.T. school, 14 students who had never had any air traffic control training at all took the entire course in a single day and scored an average of 58 per cent in the final exam.

It took six months to develop the lessons for the new table-top trainer. They are designed to let the student practice as many traffic situations as possible in a short time and in ascending order of complexity.

School Superintendent Art Johnson, Air Traffic Control, Chief Instructor Archie Novakowski and Instructors Bob Hamilton, Ed Lesage, Scott Hainer and Tom Taylor prepared and recorded the lessons in their spare time. In the final ICAO version the voices of professional actors were used.

Close co-operation between ICAO, a U.N. agency with headquarters in Montreal, and the air services training school has

come naturally ever since the school's inception in 1959.

The prototype of an ICAO-sponsored tower and radar trainer, developed in co-ordination with the Department of Transport several years ago, is still in use at the school. Discussions about mutual problems take place regularly, and recently part of an ICAO film about typewriting was shot in the Ottawa school.

Answers to Crossword on Page 23

29. Be	31. Money
28. No	30. Mason
27. C.O.	28. Nab
26. A.A.	26. ATC
24. Tan	25. To
22. Its	23. MST
17. But	20. Sum
16. Elm	19. Plane
15. Son	18. VOR
13. Memos	17. Be
11. Brass	16. Era
9. Civil	14. Is
8. E.G.	12. C.C.G.
7. Ice	10. Run
6. P.C.	5. Spiel
4. On	1. Apron
3. Rug	
2. P.R.	
DOWN:	ACROSS:

More than \$400

Awarded to 23 Suggestors

In recent months 23 D.O.T.'ers, including one pensioner, received cash or merchandise awards valued at \$415 for ideas which will save the department time, money or effort. Leading the list with a \$50 award was R. Peterbaugh, a packer at Edmonton regional stores.

Mr. Peterbaugh designed and built a cable reel lifter as a safe convenient way to lift full reels of cables. When tested, his device allowed one man to lift with ease a reel weighing nearly 1,000 pounds. Several D.O.T. stores depots across the country are now using the lifter and Mr. Peterbaugh was rewarded for his efforts with a \$50 cheque, less income tax.

Another winner, Russell R. Travers, a Lethbridge, Alberta radio technician, earned \$40 for recommending a modification to the VOR control system. He noted that voltage pulses, caused by electrical storms, actuated the control circuits of the equipment and turned the transmitters on and off unnecessarily. The modification he suggested eliminates this possible hazardous situation. He chose three items—an overnight case, golfballs and a writing case—valued at \$40 as his award-in-kind.

Other winners of awards-in-kind are:



Mr Peterbaugh receives his award cheque from G. E. McDowell, regional director of air services, Edmonton.

NAME	POSITION	LOCATION	AMOUNT
Frank Adams	technician, electronics	Ottawa	\$10
Mrs. H. J. Carson	clerk	Ottawa	\$10
Derek W. J. Challis	meteorological technician	Frobisher Bay, N.W.T.	\$15
R. W. DeLong	stationary engineer	Halifax International Airport	\$10
G. W. Elliott	radio operator	Baker Lake, N.W.T.	\$20
P. G. Ervin	technician, electronics	Moncton, N.B.	\$30
J. R. Ferguson	technician, electronics	Montague, P.E.I.	\$10
J. E. R. Gagne	meteorological communicator	Montreal International Airport	\$10
J. G. Gauthier	radio technician	Arvida, Que.	\$20
J. Gordon Graham	technician, electronics	Abbotsford, B.C.	\$15
W. A. Haigh	technician, electronics	Winnipeg, Man.	\$10
Thomas W. Hurst	radio technician (retired)	Ottawa International Airport	\$10
J. Maher	technician, electronics	Halifax, N.S.	\$30
Mrs. Brenda McDonald	stenographer	meteorological liaison, Ottawa.	\$15
A. A. Mihalicz	meteorological technician	Churchill, Man.	\$10
P. J. Purdy	air traffic controller	Vancouver, B.C.	\$20
A. A. Redick	engineer	Civil Aviation, Ottawa	\$10
Melvin D. Reid	meteorological technician	Toronto, Ont.	\$25
V. B. Skea	meteorological technician	Inuvik, N.W.T.	\$15
Robert E. Stiles	radio operator	Abbotsford, B.C.	\$20
I. F. Strathie	maintenance craftsman	Bonavista, Nfld.	\$10

Retirements

Col. Keith Dixon, well-known Victoria district marine agent, retired early in January after 24 years of government service.

First appointed district marine agent at Prince Rupert in 1941, Col. Dixon did not take up his duties until 1946 because he was on active duty with the Canadian Army. After three years at Prince Rupert he was appointed superintendent of lights at Victoria in 1949. In 1954 he became district marine agent there.

Born at Yorkshire, England in 1898, Mr. Dixon was educated at Doncaster Grammar school and Sheffield University. During the First World War he served in Egypt, Palestine and Syria with the British Forces. Two years after the end of the war he came to Canada and joined the engineering department of Canadian Pacific Railway Company. He left there in 1933 to join the Ontario Department of Highways. In 1937 he moved to Victoria where he once again was employed by the CPR.

Joining the Canadian Army at the outbreak of the Second World War, Col. Dixon rose to the rank of lieutenant colonel.

Along with his busy daily routine as district marine agent, Col. Dixon has been active in the Boy Scout Movement in British Columbia. From 1949 to 1954 he was assistant provincial commissioner. As well, he is a member of the Engineering Institute of Canada, an honorary member of the Royal Victoria Yacht Club, patron of the Victoria Power Squadron and a member of the Canadian Club of Victoria.

As evidence of the high esteem in which Col. Dixon is held by D.O.T. employees and business associates alike, several luncheons and dinners were held in his honor. The district marine agency staff presented him with an aluminum greenhouse and held a dinner at the Oak Bay Marina dining room. Luncheons were given by the interdepartmental training group, Johnston Terminals Ltd. and Island Tug and Barge Limited. and, as well, he was guest of honor at a private dinner at Government House.



Col. Dixon (left) says thank you to I. M. Campbell, deputy district marine agent, who made the presentation of an aluminum greenhouse to the retiring district marine agent on behalf of the Victoria agency staff.

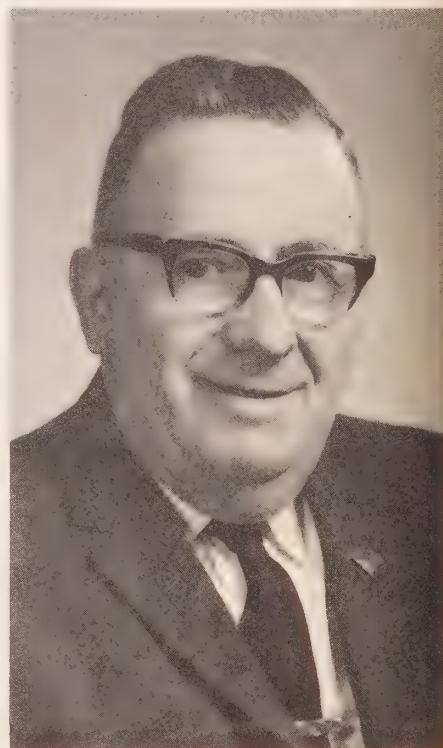
R. Edgar Adams (right) retired as office supervisor of Saint John District Marine Agency on January 12 after completing six months retiring leave.

Mr. Adams began his career in 1926 as a seasonal clerk with the old Department of Marine and Fisheries. During the next 20 years or so he received successive promotions until becoming supervisor of office services in 1954.

Mr. Adams has had a distinguished career in the Boy Scout Movement dating back to 1917. In 1938 he became assistant district commissioner and was presented with the Medal of Merit for outstanding service to scouting. In 1957 he was selected to attend the Jubilee Jamboree held at Sutton, England to commemorate the 50th birthday of scouting.

Other activities to which Mr. Adams has devoted much time and energy include the Credit Union Movement and the Saint John District Council Civil Service Association. He was recently elected an honorary life member of the latter.

At a buffet luncheon held in his honor, Mr. Adams was presented with a slide projector and screen by George L. Smith, acting district marine agent.



Charles A. Whittet (below), a technical officer with the electrical engineering division, air services construction branch, retired in December after 35 years of government service.

A native of Northampton, England, Mr. Whittet came to Canada at a young age and finished his education here. In 1913 he apprenticed to a Regina electrical firm. Three years later he enlisted in the Canadian Army and served 18 months in France.

After the war he became a journeyman electrician and was employed by Imperial Oil Ltd. from 1922 to 1930 as a maintenance electrician. He left to join the staff of the civil aviation section, air services branch of Department of National Defence as beacon supervisor.

With the formation of the Department of Transport in 1936, Mr. Whittet became an airways serviceman with this department. During the Second War, with the establishment of the Commonwealth Training scheme, he moved to Lethbridge as senior airways serviceman in charge of crews installing lighting equipment on airport training sites. When the Alberta sites were completed he moved to Vancouver air services and remained in that region until 1954, when he was transferred to Ottawa as a technical officer.

In 1953 Mr. Whittet was awarded the Coronation Medal in recognition of his work during World War II.



Alfred K. Smith, inspector of radio regulations at Saint-John, N.B., retired in February after 39 years of government service.

Mr. Smith was presented with an engraved wrist watch on behalf of friends and associates within the department. Charles

M. Williams, regional superintendent of radio regulations, made the presentation. Above, left to right: Mr. Smith, Miss Mary O'Conner, stenographer, Saint John; Mrs. Smith and Mr. Williams.



After 24 years of service with air services construction branch *K. W. Krumm* (above right) retired at the end of November. A well-known personality at headquarters, his early retirement was the result of poor health.

Bill Krumm graduated from high school in Toronto and spent the next few years in the United States Army serving in Nicaragua. In 1938 he joined the Department of

Public Works in Toronto as a draftsman. Two years later he moved to Ottawa with the Department of Transport.

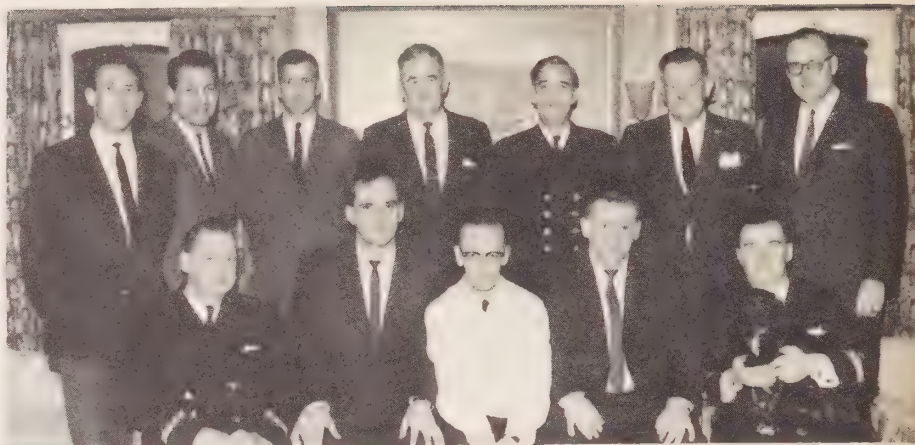
On November 30, at a celebration in his honor, Mr. Krumm received gifts and best wishes from fellow employees. W. P. Weatherall, officer-in-charge, properties, zoning and landscaping section, made the presentation.

Cross-Canada Dateline

Halifax—On January 31, a reception was held aboard the CCGS *John A. Macdonald* to honor the touring West German hockey team.

The gathering followed a game between the visitors and the Glace Bay Mooseheads, which ended in a tie. The West Germans had recently won games at Charlottetown, Fredericton, and St. John's, Nfld., and tied others at Halifax and Saint John, N.B. to remain unbeaten in their tour of the Maritimes.

Captain Paul Fournier, as host of the gathering aboard the *Macdonald*, extended a warm welcome to players and officials of the West German and Canadian amateur hockey clubs, as well as to Mr. Robert Muir, Member of Parliament for Cape Breton North and Victoria, Mr. Donald MacInnis, Member of Parliament for Cape Breton South, Mayor Russell Urquhart of Sydney, and D.O.T. Ice Operations Officer E. L. Kelso.



Standing left to right: E. Trauturen and M. Egan, captain and coach of the West German team, Mr. MacInnis, Mr. Urquhart, Captain P. M. Fournier, Mr. Kelso and Mr. Muir. Seated: J. Coleman of the *Macdonald*, N. Batten, coach of Glace Bay Mooseheads, E. George of the *Macdonald*, V. Ryan, Captain of Mooseheads and D. Hughes of the *Macdonald* holding "Midnight".

Ottawa—The damage caused by fire to air services property in 1964 was a record low of \$12,214.50. Assistant Deputy Minister, Air, G. A. Scott congratulated the regions and said that he felt the record was achieved largely by good administration practices supported by fire prevention campaigns, airport emergency staffs and the attention of every employee to fire prevention measures.

Losses and numbers of fires in the regions were as follows:

Place	Amount	No. of Fires
Moncton.....	\$ 5.00	6
Montreal.....	7,628.50	14
Toronto.....	nil	2
Winnipeg.....	435.00	5
Edmonton.....	3,971.00	4
Vancouver.....	175.00	2
Total.....	\$12,214.50	33

Ottawa—reprinted from the *Ottawa Citizen*—A civil servant is a person who draws anywhere from \$500 to \$175,000 in annual pay and is most commonly stuck behind a desk. Who says so? Several thousand high school students.

Civil servants are located mainly in the post office department, say the students, but some can be found in national employment or unemployment insurance offices, in national revenue (income tax branch), health and welfare, agriculture and emergency measures.

The students—6,000 of them in senior high school grades across the country—gave their answers in questionnaires sent

out by the Civil Service Commission to study the public image of the civil service.

Noted the commission, in a preamble to its report on the survey: "Today, thousands of Canadian Civil servants, who, during the years 1939-1945, also served their country but in a military capacity, must find the contrast between the public's image of the value of their two social roles absolutely astounding.

"Then, they were cast in an heroic mold; today, if not ignored, they may be viewed as inefficient parasites."

Startling replies—The Commission posed many questions, in an attempt to determine the kind of information it should make available to students, and got some startling replies. What is the main advantage of a civil service job? asked the commission.

B.C. boy: "You don't have to serve on a jury."

B.C. girl: "You cannot be fired."

Ontario boy: "Your licence plates do not have a letter on them."

Alberta boy: "Civil servants do not pay income tax."

Newfoundland boy: "He does not have to work but merely gives the orders."

What is the main disadvantage?

Alberta girl: "Civil servants get no holidays except Armistice Day."

B.C. boy: "Civil servants are held lowly in public opinion."

Newfoundland boy: "In a civil service job you can be voted out."

Quebec girl: "The principal disadvantage is that everyone knows the salary of a person."

Saskatchewan girl: "Civil service jobs are degrading."

Ontario girl: "How can any poor secretary in the civil service ever expect

to marry when the ratio of women to men is 4-1 in Ottawa?"

The students, as a whole, cited security and stability of employment as the main advantages, then went on from there to mention fringe benefits, good pay, good working conditions, the opportunity to do one's patriotic duty, the opportunity to travel and meet interesting people.

Conversely, they put poor pay as the number one villain in their list of disadvantages and then cited slow advancement, elements of red tape and routine work, less favorable working conditions than in industry, and forms of political interference. Despite the wide range in estimating salaries, the average concept was of starting salaries almost twice those paid and lower maximum salaries than is the case.

The general tendency was to over-estimate the length of the work week and under-estimate vacation leave.

Most students correctly identified Ottawa as the centre with the largest number of civil servants, though a few expected to find the largest group in Washington or New York.

But if they are posted abroad, then they would be:

"... employed in the diplomatic service at embassies in the capacity of clerks or informants."

"... in the armed forces spying."

"Travelling salesmen, insurance companies."

And in what kind of jobs would artistic ability be a prime qualification?

"Drawing on the paper money which is made in the mint," said an Ontario girl.

"In the advertising signs like help keep Alberta green," said an Alberta girl.

Edmonton—A semi-automatic message switching centre was recently installed at Edmonton International Airport. (photo at right)

Incoming aeronautical messages on punched tape for relay to one or more other destinations used to be torn off one machine and fed into another by hand. Now operators in foreground push buttons that route messages electronically. Consoles in the background produce copies for records.

Similar centres are in use at Vancouver and Winnipeg, and will be installed at Toronto, Montreal, and Gander.

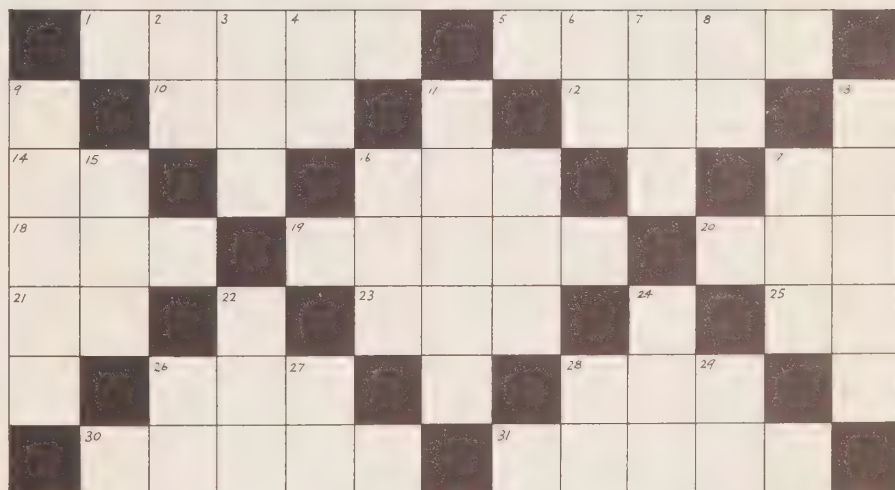
Vancouver—The "Doc Quealy Award" for the best entry in the Fire Prevention Week contest was won this year by Penticton Airport. The presentation was made to Airport Manager Stewart Jackson by H. K. Jenns, the B.C. deputy fire marshal. In his remarks Mr. Jenns said that people generally dislike instructions or orders in matters affecting fire safety and the best approach seems to be an indirect one. He complimented Mr. Jackson on his imaginative approach to the problem.

Mr. Jackson, airport manager at Penticton for the past 18 years, used a humorous approach. Situations were staged, photographed and mounted in an illuminated "peek box" complete with fire prevention placards. The "peek box" was placed in the terminal waiting room with the slogan, "Fire Is Hell In The Wrong Place", visible to all. Local papers ran stories and photographs of the exhibit and many people visited the airport to see it.

Mr. Jackson says his respect for fire dates back to his days as a mate aboard a merchant marine vessel. The crew worked night and day for three days to save the vessel after fire broke out in 2,000 tons of coal from spontaneous combustion. On yet another occasion, as mate aboard the "Baychimo", he experienced a similar thing when coal being carried to Arctic outposts caught fire.

Toronto—At meteorological headquarters they are still chuckling over two recent requests from students:

An Alberta student asked, "Would you send me a 24 x 20 paper picture of a meteor, meteorite and the sun and earth in the background . . .". Another, from Nova Scotia, wasn't quite so explicit. "I have heard of your wonderful offer and would like very much for you to send it to me"!



Across

1. Parking area for aircraft
5. Story
10. Flee
12. Coast Guard
14. Exists
16. Period
17. Exist
18. Radio aid
19. Aircraft
20. Total amount
21. Preposition
23. Mountain time
25. Preposition
26. Function of D.O.T.
28. Apprehend
30. Worker in stone
31. Current coin

Down

2. Public relations
3. Floor mat
4. Preposition
6. Privy Councillor
7. Frozen water
8. For example
9. Non-military
11. Copper alloy
13. Notes
15. Child
16. Tree
17. Only
22. Possessive
24. Sunburnt color
26. Anti-aircraft
27. Commanding Officer
28. Not any
29. Exist

See page 18 for answers

Canadian Coast Guard ALBUM



An unusual buoy-tending vessel, designed for operation on the Mackenzie River system where the waters are frequently deep and fast, CCGS "Tembah" has a draft of only three feet and has four rudders to ensure steering control. She was built at the yards of Allied Builders Ltd., Vancouver, cut into sections for delivery by rail to Waterways, Alberta, and reassembled. She entered service in September, 1963.

CCGS TEMBAH

LENGTH: 123 feet, 10 inches

BREADTH: 26 feet

DRAFT: 3 feet

POWER: Diesel, 920 B.H.P., twin screw

GROSS TONNAGE: 178

41 T 15

T 61

may/june 1965

- THE TREE
- D.O.T'ers TO DDP
- D.O.T.'s EXPO EXHIBIT



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COVER

"The Tree"—the symbolic maple which will form a part of Canada's People exhibit at Expo '67. (See story page 10). Artwork by J. Boyer, designer, Canadian Government Participation project.

EDITOR

Yvonne McWilliam

NEWS ON THE DOT is a Department of Transport staff magazine published under the authority of the Minister, Hon. J. W. Pickersgill, by the Information Services Division.

Shortly before this issue went to press a reorganization of the department's administration and personnel branch, with new titles for senior officials, was announced.

The changes were made for several reasons to adjust the branch to the department's financial management program, to meet the requirements of anticipated collective bargaining and to be prepared for greater authority in selection, promotion and other staffing matters.

Director of Administration and Personnel J. Roy Baxter becomes assistant deputy minister of personnel and administration, while the chiefs of personnel services, staff requirements and salary administration and management services become directors. These positions are held by W. A. MacPherson, A. M. Atchison and J. I. Carmichael respectively.

Greater emphasis is being placed on computer programs by the creation of a new position, director of computer program and general administration. The officer appointed to this position will be in charge of certain other general administration functions.

Other changes involve information services division's transfer to the deputy minister's office under D. A. McDougal, executive assistant. Formerly the division was responsible to the chief of administrative services. The catering office is also being transferred and split in two. In air services it will become part of the airport and property division and in marine services it will be under marine operations branch.



From the Deputy Minister's Desk

Le mot du sous-ministre

In 1967 Canada will celebrate its one hundredth birthday. Special projects and events are being planned by Canadians across the country. In the Department of Transport we wish to do our part to make this year memorable and we are collecting ideas about projects, displays, or events for which the department might assume responsibility. These need to be related to the work of the department and suitable for Centennial Year.

We know that to select a few good ideas we must obtain a great many different proposals to begin with. A small committee at headquarters has been asked to review proposals that are received. We are looking for ideas that relate to our field activities—not just events that are centred upon headquarters. It would be very helpful if members of the department who have suggestions could send these in so that they may be considered.

Le Canada célébrera son centenaire en 1967. Pour fêter comme il se doit cet anniversaire, des Canadiens d'un océan à l'autre sont à préparer la réalisation de projets et d'événements spéciaux. Le ministère des Transports désire lui aussi contribuer au succès de ces célébrations; à cette fin, il prend note des travaux, étalages ou initiatives qui lui sont proposés et dont il pourrait assumer la réalisation. Ces propositions doivent se rapporter à l'œuvre du Ministère et être dans le ton de l'Année du centenaire.

Pour choisir quelques idées intéressantes, il faut d'abord qu'un grand nombre de propositions soient présentées. On a confié à un petit comité du bureau central la tâche d'étudier les propositions reçues. Nous voulons des idées qui ont trait à l'activité régionale et locale du Ministère, et non seulement à celle du bureau central. Les employés qui auraient des propositions sont invités à nous les faire parvenir pour étude.

J. R. Baldwin



Going over details of some purchase orders are, left to right: J. A. G. Saint Laurent, chief; R. J. D. Brown, superintendent of contracts and M. E. Wahab, superintendent of purchases.

D.O.T.ers go over to D.D.P.

by Yvonne McWilliam

D.O.T. lost 95 employees on April 1, 1965—but in name only. The department's purchasing division has been put under the mantle of the Department of Defence Production. For the 43 headquarters and 52 regional and district employees, however, the change wasn't obvious. They perform the same duties in the same offices, sitting at the same desks and dealing with the same people.

The transfer resulted from a Royal (Glassco) Commission on Government Organization recommendation that a central body be set up to handle purchasing requirements for a variety of departments. The object is to effect savings from bulk buying. To date three major government departments—Public Printing and Stationery, Public Works and Transport—have transferred their purchasing activities to the newly-created central body, the Canadian Government Supply Service headed by Project Manager Arthur Bailey.

Every year the Canadian Government buys more goods and services than any other corporation or agency in the country. Purchases include office material and supplies, equipment, services, construction and rentals. The Glassco Commission found "that there is a large number of government buying offices" and "there is no uniformity of purchasing authority or practices in the government. Some items are used in sufficient quantity to make economic bulk buying possible, but not by any one department or branch and, with the large number of separate buying offices, cannot be purchased at bulk prices."

Commercial trends, as the Glassco Commission recognized, made consolidation both imperative and inevitable. Central purchasing, regional purchasing, cataloguing specifications and standards, traffic management, quality assurance, warehousing and distribution had to be integrated under a single command. Only then would maximum savings and first class service be possible. Actually, the new Canadian Government Supply Service

is a response to new marketing and purchasing concepts.

As early as 1908 a Royal Commission recommended that authority for contract-letting be taken out of the hands of individual officers and vested in departments. Now all government purchasing will go to a single authority.

With their switch over to the new supply service, D.O.T.'s purchasing people brought considerable experience.

Purchasing orders to support D.O.T.'s marine, air and related services are the largest of all government departments with the exception of National Defence and can run up to \$45 million in a fiscal year. Approximately 150,000 items are carried at the 29 stores depots across the country.

The principle of "full value for money spent" and the one which ensures it—seeing that all Canadian firms get an equal chance to supply the department's needs—have been the division's guide lines, together with the need for fast and efficient service.

Sometimes this policy has demanded ingenuity, like the barter arrangements it was necessary to enter into when employing casual Eskimo labor in the North. Purchasing people put their fingers through the pages of department store catalogues for items with color or other appeal. Cowboy and western records, they found, went over best with the Eskimos.

The purchasing division under J. A. G. Saint Laurent as chief, is made up of three sections; contracts, headed by Superintendent R. J. D. Brown; purchasing under Superintendent M. E. Wahab; and stores, under Superintendent L. H. Russett. The functions of purchasing have been switched to the Canadian Government Supply Service, while those of contracts and stores will stay with Transport.

Purchasing is handled on a commodity basis, each under its own agent for maximum experience and continuity. It involves buying items ranging from "soup to jetstars" or "soup to ice-breakers."



Tom Dunleavy (left), chief supply officer at Ottawa aircraft stores depot, discusses a parts problem with A. B. Williamson, chief mechanic, helicopters.

J. G. Manion (left), inventory control officer, and G. H. Dawson, material identification and cataloguing officer, preview a major project to be done in the Ottawa area, involving some 150,000 items kept in stock.



Standard stock supplying is consolidated at headquarters under a tender system on an annual basis. Deliveries are either immediate or staggered. About \$5 million is spent annually by regional and district offices for material, supplies and equipment within delegated authority of headquarters operating branches. This enables the division to take advantage of local discounts and advance the government's general policy of local preference providing the supplier is responsible, has comparable quality standards and the lowest price.

Tight inventory control has always been a concern of the stores section. Unlike an industrial plant which concerns itself with production inventory, D.O.T.'s inventory is the maintenance and operations type. Some months ago the division began using the services of the 1401 computer in the department's data processing centre. Next year, when the new IBM 360 is installed, the division hopes to set up a modern central inventory control in conjunction with a cataloguing project involving all 150,000 items in the stores depots.

Mr. Saint Laurent, an honors graduate from the University of Ottawa, is, like his alma mater, bilingual. He was appointed chief of the purchasing division in 1957 after 30 years with the department in progressively more responsible positions. He is one of the few people still with D.O.T. who served with the former Department of Railways and Canals—from 1927 to 1937 when he worked for that department in Montreal.

Although the spelling of his surname is different, on several occasions he has been confused with former Prime Minister Louis St. Laurent. Once during the Second War both gentlemen were registered at the Admiral Beatty Hotel in Saint John, N.B. To add to the desk clerk's confusion a Mr. A. St. Laurent of the St. Lawrence Ship Channel was there, too, and the clerk had great difficulty in delivering the right mail to the right St. or Saint Laurent.

Another time, when wiring ahead for reservations at a CNR hotel out West, D.O.T.'s Mr. Saint Laurent received a confirmation addressed to the Hon. Mr. St. Laurent. Having no time to

Invitations to tender, and large volume of purchasing orders and reports are typed by the typing pool staff.



L. H. Russett, superintendent of stores and plant, checks through Kardex system controlling some 22,000 different items stocked in Ottawa stores depot.





Purchasing agents can look up details of many items they must order in the countless suppliers catalogues on the purchasing library's shelves. Agent G. B. Donnelly (left foreground) double checks an item with F. A. Condon, clerk in charge of the library.

straighten out the mistake he received the red carpet treatment on arrival. But someone who does have the same name, spelled the same way, is former Montreal Canadian hockey star Dollard Saint Laurent. He is a nephew of D.O.T.'s purchasing chief.

Mr. Saint Laurent is a director and past president of an Ottawa Caisse Populaire and recently was very proud to receive a "pro ecclesia et pontifice" medal from his church.

Mr. Brown's purchasing experience dates back to his youth when he assisted his father in a general store and appliance business founded in Brigden, Ontario by his grandfather.

At the beginning of World War II he came to Ottawa and joined the stores and audit branch of the Department of National Defence, switching over to the shipbuilding branch of Munitions and Supplies a few months later. In 1942 he joined D.O.T.'s purchasing staff. He was appointed superintendent of purchases in 1954 and three years later, superintendent of contracts.

During those years Doug Brown has been involved in many interesting jobs, including establishing a local purchasing office in Newfoundland at the time of that province's Confederation in 1949. He recalls with some amusement how he had to purchase all the supplies for the St. John's marine agency and Gander airport during the first three months' transition period—including ladies stockings for the airport gift shop. Knowing little about sizes and even less about colors he got advice from some of the girls in the division as to what shades and denier were in vogue.

Perhaps some things are inevitable for certain purchasers, but that never makes it easier. One day he spent three hours at the Department of Health's nutrition centre tasting soups, tv dinners and the like, only to arrive home and have his wife serve him a tv dinner because she was late getting home from shopping.

A native of Hull, Quebec, M. E. "Mac" Wahab has been with D.O.T.'s purchasing division since leaving high school in 1941. During the next 16 years he moved steadily up in the division and, in 1957, was appointed superintendent of purchases.

He, too, can recall some "agonizing" moments connected with his work—like having to completely outfit the icebreaker d'Iberville with provisions, fuel, etc., with only five days notice, so she could carry Canada's official party to the 1952 Coronation of Queen Elizabeth II.

Once he remembers scratching his head over a requisition for a set of stairs. That was all the detail given; no measurements, no specifications. What was wanted could have been a step ladder for a hay loft or a circular staircase worthy of Versailles.

Other members of the staff have had similar experiences, but knowing the in's and out's of D.O.T. operations and requirements they usually can clear up any such confusion in jig time.

Their task with DDP will be no different. They will continue to be concerned solely with buying items for Transport. They will provide a service function with money to pay for purchases coming from D.O.T.'s annual budget. However, many a dollar should go further if it is married to one from a department with a similar requirement. Much duplication should be eliminated, but the stress will always be placed on giving special attention to the individual needs of each department.

It looks like Transport, and other departments who now use the facilities of the Canadian Government Supply Service, will enjoy the "best of both worlds". We will continue to deal with our "own" purchasing people, but will receive the benefits in economy and efficiency which result from a consolidated purchasing authority.

RUSSIANS GET FIRSTHAND LOOK AT CCG ICE OPERATIONS

By Ken Parks



Ice, be it the Canadian or the Soviet variety, will always be a problem to seafaring men who face the task of keeping shipping on the move when Old Man Winter is holding sway.

Such was the obvious deduction following a visit during March of three Russian marine experts to Canada, during which they steamed through the Gulf of St. Lawrence aboard the Canadian Coast Guard icebreaker "John A. Macdonald" and observed Canadian methods of dealing with sea ice.

The party's visit was the return half of an exchange program of ice studies that was opened the previous winter by a Canadian marine and scientific group that visited Russian and Finnish marine operational and research facilities.

The Soviet party was headed by Alexander Alexandrovich Afanasiev, chief of the navigation department and member of the Marine Ministry, U.S.S.R. With him were Yuri Georgievich Levin, chief of the Arctic and Icebreaking Fleet Board, Arctic Seas Steamship Line, and Lonid Vassilievich Padorin, chief of the commercial department, Arctic Seas Steamship Line.

Accompanying them on their Canadian marine journey were Gordon W. Stead, assistant deputy minister, marine; Marine Operations Director A. H. G. Storrs, and Miss Moira Dunbar, geographer and ice expert with the Defence Research Board. They were members of the delegation that went to Russia last year, the others being J. R. Strang, D.O.T.'s director of shipbuilding; Capt. Wilfrid Dufour, master, CCGS "d'Iberville"; W. E. Markham, officer-in-charge of the department's ice central office at Halifax, and Dr. A. E. Collin, oceanographer with the Mines and Technical Surveys' Bedford Institute of Oceanography at Dartmouth.

Travelling as interpreter with the visitors on their Canadian tour was Gregory Belkov of the National Research Council. In matters concerning shipping, however, the Russians displayed a considerable understanding of English marine terms.

Before going to Sydney they visited Halifax where National Harbours Board Port Manager J. R. Mitchell and District Marine Agent Frank Weston took them on a tour of the harbor.

They also lunched aboard CCGS "Edward Cornwallis" at the Dartmouth Marine Agency, went aboard CCGS "Narwhal" and saw the northern supply vessels that are based at the agency.

By the time the delegation boarded CCGS "John A. Macdonald" at Sydney, ice conditions had eased somewhat in the eastern half of the Gulf but there was still enough to provide heavy going for some miles off Sydney and in the Bay of Chaleur area. They

GETTING THE HIGH-UP "LOW-DOWN"—The Russian icebreaking experts enjoyed a trip in CCGS "John A. Macdonald's" helicopter during their Canadian visit. Seen here with Pilot J. E. McSweeney, officer-in-charge of helicopter operations, Moncton Region, seated at the controls, are Mr. Afansiev, Mr. Levin and Mr. Padorin.

had an excellent opportunity to see how Capt. Paul Fournier worked the "John A." in fairly heavy ice when, bringing the freighter "Dartwood" out of Chandler, Que., they encountered a heavily rafted area.

The Russian visitors showed keen interest in the various types of icebreakers they saw working in the area, including Canadian Coast Guard vessels "d'Iberville", "Labrador" and "Sir William Alexander".

On the second evening of the Russians' trip, they were guests of honor at a reception in the officers' lounge. For the occasion, the ships' staff under Purser R. Hughes and Chief Steward James Coleman prepared a buffet that did full justice to the "international V.I.P." occasion.

During the evening Mr. Afanasiev addressed the ships' officers and described Russian icebreaking problems and tactics. Ice in the Russian Arctic, it seemed apparent, was heavier than that usually met by Canadian ships in the Canadian Arctic Archipelago. This was due to the fact that, generally speaking, the vast, unbroken expanse of ice north of the Russian coast tended to freeze to much greater depths than was the case among the islands, where sheltered conditions and strong currents provided varying degrees of break-up and open channels.

The Gulf of St. Lawrence ice, however, presented a much more difficult problem to shipping than the ice usually found in the Baltic Sea, where a passage broken through the relatively land-fast ice tends to stay in the same place and repeated passage of shipping keeps it open.

In the Gulf of St. Lawrence, Canadian Coast Guard icebreakers can escort vessels and, due to movement of the ice by wind and current, the track they have made may close again within minutes or move many miles within a few hours, so that

it cannot be followed twice. Such movement also causes pressure ridges to form that may be 20 or 30 feet deep, sufficient to halt the heaviest icebreaker or endanger an ordinary ship that gets caught in them.

Russia's icebreaker builders favor vessels of somewhat narrower hull design than that which has been found most successful in coping with the conditions faced by Canadian Coast Guard icebreakers. In the latter, provision is made for a limited amount of cargo carrying capacity, to meet the need for delivery of once-a-year supply shipments to Arctic outposts that are beyond the safe reach of conventional cargo ships, even those of ice-reinforced construction. The smaller vessels are also designed to work as lighthouse supply and buoy tenders.

The "John A." docked at Sept Isles, Que., from where the visiting party took off, accompanied by the Ottawa officials, for Quebec City. There, accompanied by District Marine Agent George Gaudreau, H. L. Land, chief, St. Lawrence Ship Channel, and National Harbours Board Port Manager Paul Bousquet, they toured the department's district marine agency and the NHB harbor facilities. During the visit, they stopped briefly for coffee aboard CCGS "Montcalm" and talked with Capt. R. J. Turbide and Chief Engineer J. S. McClintock.

From Quebec the party flew next day by D.O.T. aircraft along the St. Lawrence River to Montreal, taking the visitors low over the seaway installations to give them a good view. Following the flight the Russian party remained in Montreal to visit the harbor.

During their shipboard visit the Russian guests were each presented with a Canadian Coast Guard badge mounted suitably for hanging as souvenirs in their offices. They, in turn, presented every member of the ship's company with souvenir badges bearing the likeness of the Russian atomic icebreaker "Lenin".

STUDYING THE ICE AREA—Looking at the D.O.T. ice information office map at Sydney, N.S. during a discussion of icebreaking tactics are, from left, Gordon W. Stead, assistant deputy minister, marine; Mr. Afansiev, Miss Moira Dunbar of Canada's Defence Research Board; Mr. Padorin, Mr. Levin and Gregory Belkov of the National Research Council, who acted as interpreter for the visiting party.





Model of the \$21,000,000 Canadian Government exhibit shows D.O.T.'s contribution in left foreground. The irregular-shaped pool will serve as the working area for 3 model vessels to illustrate how D.O.T. breaks ice along Canada's coasts.

D.O.T.'s Expo Exhibit is "On The Rails"

D.O.T.'s exhibit for Expo '67 will exemplify a facet of the Canadian struggle against nature in this land of the north.

The department has chosen to demonstrate its role in ice-breaking. A 100-foot wide by 150-foot long pool containing three vessels, a lighthouse and a land mass will show how we do it.

Radio-controlled, three $\frac{1}{4}$ " scale model ships will demonstrate icebreaking assistance to commercial vessels and operations of buoy-laying ships.

The icebreaker and lighthouse supply and buoy-laying ships will be exact models of yet-to-be-commissioned Canadian Coast Guard ships—the huge triple-screw icebreaker due in 1967 which will be the world's most powerful conventional icebreaker, and a combined medium icebreaker, lighthouse supply and buoy vessel.

The other model vessel will represent an ore carrier of undetermined nationality. The lighthouse model will be fashioned after the wasp-waisted Prince Shoal light located at the confluence of the St. Lawrence and Saguenay Rivers.

The D.O.T. display will be part of the \$21,000,000 Canadian government display—the greatest of its kind ever assembled in one place by Canada. Buildings alone will be worth some \$6,000,000, while another \$7,500,000 will be for exhibits.

The \$65,000 contract for the D.O.T. models went to Philippe Demeules of Sorel, Quebec, one of a few such expert model makers in the country.

It calls for the models to be built of cast bronze and aluminum with fibre glass superstructures. Each will be electrically-propelled, lighted, radio-controlled and all-weather-proof. And they won't be "Dinky" toys. The icebreaker will measure $7\frac{1}{2}$ feet in length, the buoy-laying vessel, just over five feet and the ore carrier, about $15\frac{1}{2}$ feet. The lighthouse, complete with revolving light and ominous foghorn will stand $18\frac{1}{2}$ inches above the water.

A land mass typifying the Canadian coastline will take up one end of the pool and will be surrounded by artificial ice made from

cakes of paraffin wax with a layer of styrofoam on top for snow. With the help of currents created by blowing water through underwater pipes, "ice" jams will form.

D.O.T.'s show will go on every half hour or so day and night. The carrier will leave the dock at the southwest end of the pool, steam across and up the far side, into the ice. She will be jammed fast. Then the icebreaker will pull away from her berth at the dock on her mission. She will break up the jam and clear a path for the beset vessel. Both will return to the dock passing directly in front of spectator bleachers for their bows.

While the icebreaking demonstration takes place, the lighthouse supply and buoy-laying vessel will leave for the lighthouse to deliver cargo, lay a buoy, retrieve it and return to the dock to complete the show.

All the activity will be controlled by one person located in a nearby control room. He will sit behind a push button, single console—a transmitter equipped with a separate set of keys for each vessel. Each ship will have a receiver.

The D.O.T. project was conceived by J. R. Strang, director of shipbuilding. He believed the idea of showing Expo visitors how the Canadian government tackles its annual task of breaking ice along our coasts and in the Gulf of St. Lawrence would appeal naturally to both Canadian and foreign visitors.

Mr. Strang discussed his ideas with others in the department, including technical officer George Burgess. They then drew up specifications and tenders were called.

Mr. Demeules has built several ship models for D.O.T. in the past. His latest contract is for the entire Expo package—the four models, all radio equipment etc.—and calls for completion by March 15, 1967. This allows for a month of trials and necessary adjustments before the Fair opens on April 27.

When it winds up six months later the D.O.T. exhibit will be shown elsewhere; at Coast Guard Days at various agencies and other marine displays.

The People — a chance to see ourselves

Canada's best known maple tree has barely been planted. Two years from now it will be almost 78 feet tall, and the centre of attention of millions.

Its roots will be sunk into the Canadian Government pavilion at Expo '67, and one of its purposes will be to describe Canadians to foreign visitors. Even more important, though, it will give Canadians an insight into themselves.

This symbolic maple, part of the People exhibit, will be a picture of what Canadians are. The soil surrounding it will illustrate our external influences; the roots, our sociological, cultural, ethnic and economic sources; the trunk will symbolize unity; and the branches and leaves will be life-size photographs of Canadians at work, at play, arranged on an open air frame with internal walkways to let visitors get a handshake view of our population composition.

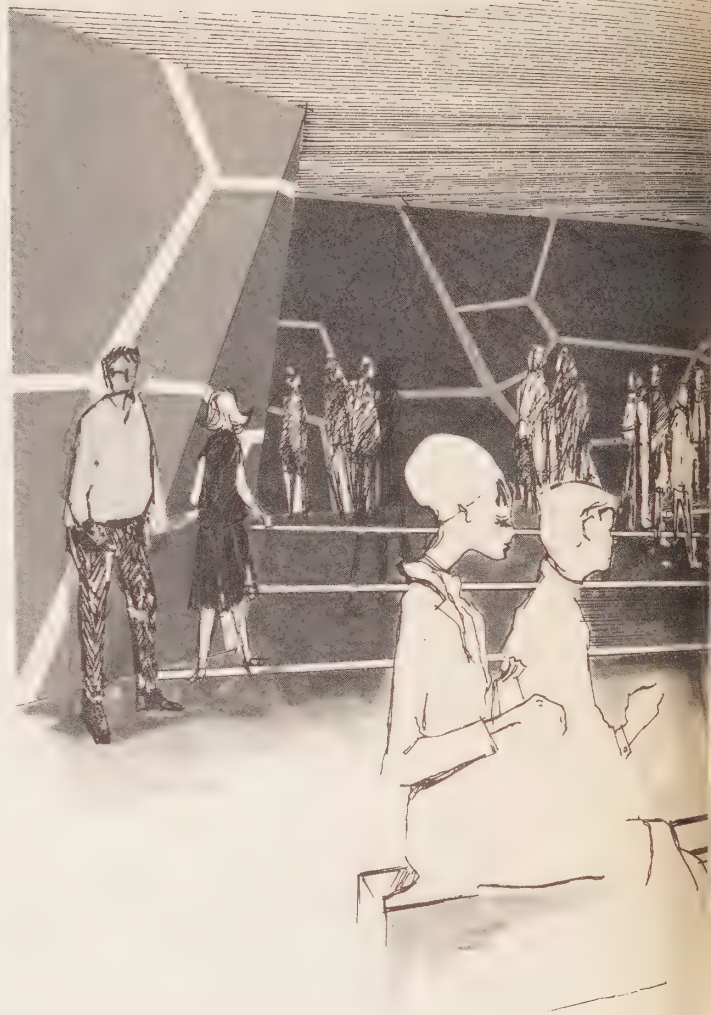
H. Leslie Brown, the Commissioner General of Canadian Government Participation in Expo '67, has asked government departments and their employees for ideas for "The Tree". Thoughts should be useful as specific, catchy items illustrative of broad themes rather than the generalization itself. For example, peculiar facts about Canada. (For 11 consecutive years Canadians have held the title as the world's most talkative people on the telephone, per capita.)

The Canadian Government Participation project—a separate entity under the jurisdiction of the Minister of Trade and Commerce—is divided into working groups, each responsible for specific parts of the total \$21,000,000 Canadian exhibit. The group working on "The Tree" have laid down certain broad objectives, but apart from that they are ready to listen to whatever individual suggestions government employees or others may come up with. They are seeking ideas that are significant or serious, curious or strange—anything, in fact, which is of popular interest.

The kind of ideas they want might be anecdotes, humorous or otherwise, on any aspect of Canadian life; peculiar facts like the telephone propensity already mentioned; misconceptions about Canada, by one part about another, by foreigners about Canada (Americans arriving in Toronto in July with skis, sort of thing); experiences of new Canadians; historical predictions about Canada by Canadians or foreigners; influences on Canada by other nations (Coca-Cola, Chinese food, parliamentary institutions, games). Any fact or idea you have along these or other lines might well find its way into the People exhibit—"The Tree".

Visitors will view "The Tree" from two levels; one is the plaza where the trunk and the leaves and branches will be seen. A large circular hole of 64 feet will cut into the plaza for the other view. This will allow visitors to see and walk down into the roots and soil where an area 96 feet square will be divided into distinct quadrants.

These will contain groupings of influences—people, commodities, communications media and ideas. There will be the Russian, Eskimo and Indian influences, the European contributions, the American impact, industrial techniques and consumer products; and the Oriental and Asian influences.



Here, too, visitors will be able to examine Canada's roots; sociological, cultural, ethnic and economic. For example the sociological quadrant will show the Canadian swing from rural to urban society and its characteristics. The main feature will be in the centre of this quadrant—a large display table 13 by 15 feet describing, by means of three mechanically-activated animations (sound, light and movement), how the rural-urban migratory flow has created cities for Canada. It will attempt to show facts like this: in 1901 only 37.5 per cent of Canada's population lived in incorporated cities, towns or villages, compared to 71.1 per cent in 1961. In other words we have almost twice as many urban dwellers as we did 50 years ago. Furthermore in 1961, 45 per cent of the population lived in 17 metropolitan areas and 69 per cent of these lived in Montreal, Toronto, Vancouver, Winnipeg and Ottawa. Tied in with these animations will be audiovisual techniques which will highlight some of the effects of urbanization such as assimilation problems, stress and so on.

Walkways among the roots will contain machines to be operated by the public. Resembling parking meters in size and shape, these will feature the anecdotes, capsule facts and quotations which the Commissioner General has asked for. If you have any ideas send them to J. Boyer, designer, or D. Manders, researcher, Canadian Government Participation, 1967 Exhibition, Sir Alexander Campbell Building, Ottawa.

Who knows? When you visit Expo '67 you may be able to turn to your friends and say, "That's my idea."



Un miroir de notre communauté humaine à l'Expo '67

L'érable le mieux connu du Canada vient à peine d'être planté, mais il aura atteint dans deux ans une hauteur de 78 pieds et sera devenu le point de mire du monde entier.

Enraciné dans le sol du pavillon du gouvernement canadien à l'Expo-67, cet arbre géant aura pour but de faire connaître la communauté humaine du Canada aux visiteurs étrangers. Toutefois, son rôle le plus important sera peut-être de permettre aux Canadiens de se connaître eux-mêmes.

Cet érable symbolique, qui se dressera dans la partie du pavillon canadien consacrée aux habitants du Canada, sera une image de ce qui les constitue. Le sol sur lequel il pousse représentera les influences extérieures qui ont modelé nos façons de vivre; ses racines illustreront nos composantes sociologiques, culturelles, techniques et économiques; son tronc symbolisera l'unité du peuple canadien; enfin, ses branches et ses feuilles seront constituées par des photographies grandeur nature montrant les Canadiens à leur travail et dans leurs loisirs, montées sur une charpente en plein air dans laquelle seront aménagées des passerelles qui permettront aux visiteurs d'examiner de près les diverses couches de notre population.

Le Commissaire général de la participation du gouvernement canadien à l'Expo-67, M. H. Leslie Brown, a demandé aux ministères de l'État et à leurs employés de lui faire part de leurs idées pour le secteur de l'Arbre. On doit y joindre l'utilité et la précision, sous forme d'images qui attirent l'attention et qui illustrent des thèmes généraux; on ne doit pas viser uniquement

à la généralisation des thèmes. Il s'agirait, par exemple, de représenter des faits particuliers au Canada. (Durant 11 années d'affilée, les Canadiens ont été les plus bavards du monde entier au téléphone, par tête d'habitant.)

La Participation du gouvernement canadien à l'Expo-67, organisme récemment créé qui relève du ministre du Commerce, est formé de groupes de travail chargés d'aménager les divers secteurs du pavillon canadien, dont le coût s'élèvera à 21 millions. Le groupe du secteur de l'Arbre a établi certains objectifs généraux, mais il est disposé à étudier les diverses idées que peuvent présenter les fonctionnaires de l'État ou d'autres personnes. Il recherche toutes sortes d'anecdotes, qu'elles soient importantes ou sérieuses, curieuses ou étranges, bref tout ce qui illustrera une facette de la vie des Canadiens.

Il pourrait s'agir d'anecdotes, drôles ou non, sur tout aspect de la vie des Canadiens; de particularités comme l'habitude de téléphoner, dont on a parlé antérieurement, de préjugés que nourrissent les habitants d'une région du pays envers ceux d'une autre région, ou que nourrissent les étrangers sur notre pays (par exemple, les Américains qui arrivent à Montréal en juillet avec leurs skis); il pourrait s'agir également de l'adaptation des Néo-Canadiens à leur nouveau mode de vie; des prédictions faites par les Canadiens ou les étrangers quant à l'avenir du Canada; des influences exercées sur le Canada par d'autres nations (Coca-Cola, mets chinois, institutions parlementaires, loisirs). Il se peut bien que les faits ou les idées de ce genre ou



audio auxiliary + bench.
short facts + anecdotes

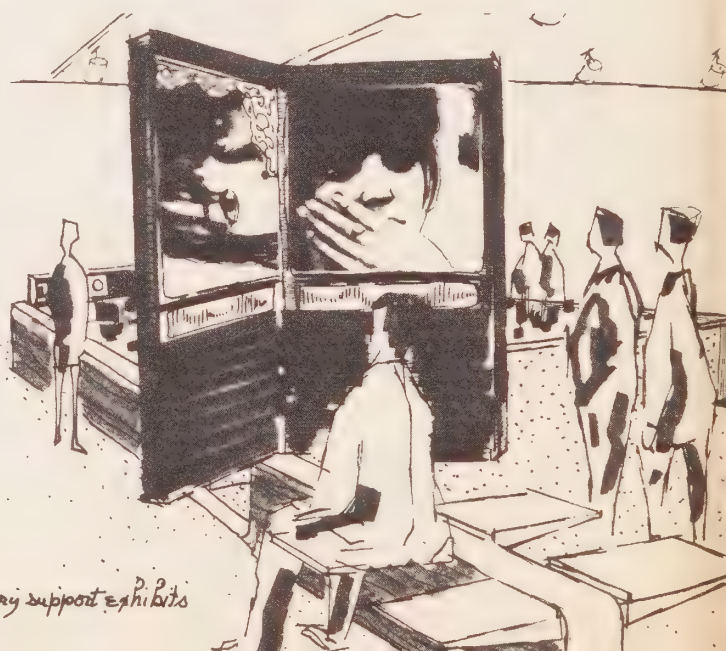
d'autre genre que vous présentiez soient adoptés pour faire partie du secteur consacré à la communauté humaine, «l'Arbre.»

Les visiteurs pourront admirer l'Arbre à deux niveaux; ils pourront le voir d'abord depuis la Place du carrefour où se profileront le tronc ainsi que les feuilles et les branches. Ils pourront également l'examiner à un autre niveau grâce à une immense excavation circulaire d'une circonférence de 64 pieds pratiquée dans la place. Ils descendront ainsi parmi les racines et dans le sous-sol dont une superficie de 96 pieds carrés sera divisée en quatre quadrants distincts; au niveau du sol ils verront les influences et l'apport des civilisations qui nous entourent, que ce soit dans la domaine des denrées, des moyens de communication et des idées. Ces diverses influences ont été exercées par les Russes, les Indiens et les Esquimaux, les pays d'Europe, les États-Unis d'Amérique (méthodes industrielles et produits de consommation) et les pays de l'Orient et de l'Asie.

En poursuivant leur descente dans les racines, les visiteurs pourront assister à l'évolution sociologique, culturelle, ethnique et économique du Canada. Par exemple, dans le quadrant sociologique, ils pourront constater comment le Canada est passé de ses origines rurales à la civilisation urbaine et en voir les différentes caractéristiques. L'étalage principal sera situé au centre de ce quadrant; il s'agira d'un grand plateau de 13' sur 15' qui décrira par le son, le mouvement et la lumière, comment la migration des agriculteurs vers les centres urbains a donné lieu à l'établissement des villes canadiennes. On y verra entre autres l'illustration des faits suivants: en 1901, 37.5 p. 100 seulement des habitants du Canada habitaient des cités, villes ou villages constitués en corporation, contre 71.1 p. 100 en 1961. En d'autres termes, la population urbaine a presque doublé dans cinquante ans. En outre, 45 p. 100 des Canadiens habitaient en 1961 dix-sept régions métropolitaines; sur ce nombre, 69 p. 100 demeuraient à Montréal, Toronto, Vancouver, Winnipeg et Ottawa. En plus de ces illustrations animées, des écrans sonores permettront de mettre en lumière certains résultats de l'urbanisation, comme les problèmes que posent l'assimilation, le stress et d'autres.

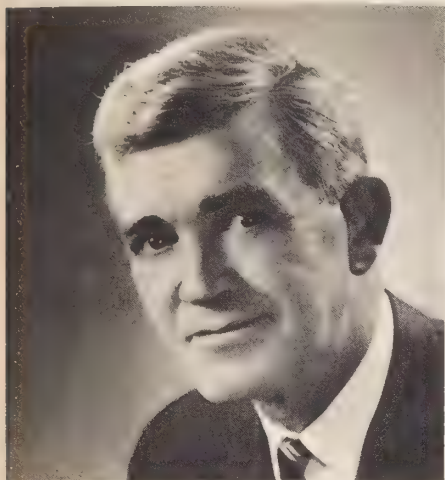
Au milieu des voies de circulation qui traverseront les racines seront disposés des appareils, genre compteurs de stationnement, que les visiteurs pourront mettre en marche pour écouter les anecdotes, les traits et les citations qui ont été demandés par le Commissaire général. Vous êtes priés de faire parvenir vos idées à M. Don Manders, chercheur, ou à M. Jean Boyer, designer, Participation du gouvernement canadien, Exposition de 1967, immeuble Sir Alexander Campbell, Ottawa.

Sait-on jamais? Devant un étalage de l'Expo-67 vous pourrez peut-être vous exclamer devant vos amis: «C'est merveilleux, n'est-ce pas? Evidemment, cette idée vient de moi.»



one of two secondary support exhibits

New Appointments



R. R. MacGillivray



Capt. J. G. L. Brie

Director, Marine Regulations

The appointment of Ronald R. MacGillivray, senior advisory counsel of the department, as successor to Alan Cumyn, director marine regulations, who will be retiring towards the end of this year, was announced in April. Mr. MacGillivray will join the marine regulations branch on July 1 in order to provide a period of experience in the branch before taking over its management.

Mr. MacGillivray is a native of Saskatoon, Saskatchewan, where he graduated from the University of Saskatchewan in 1940 with a B.A. and LL.B. He served with the First Canadian Division, Canadian Army during the Italy and Northwest Europe campaigns and attained the rank of captain. On his return to civilian life he began his government service with the Department of Veterans Affairs as the district solicitor, Saskatoon.

Mr. MacGillivray is a member of the Canadian Bar Association, International Law Association, Canadian Maritime Law Association and the Royal Canadian Armoured Corps Association. He has been with the Transport Department as a solicitor and senior advisory counsel since 1950. During this time he has been involved with many legal aspects of D.O.T.'s activities and has specialized in marine legislation. This has kept him in close contact with the work of the marine regulations branch.

Director, Canadian Coast Guard College

Capt. J. Gerard L. Brie, 42, of Rimouski, Quebec, has been appointed director of the Canadian Coast Guard College which is being established at Sydney, N.S.

Capt. Brie was director of studies at the Quebec Provincial Marine School at

Rimouski from October 1959 until his D.O.T. appointment in March. For four years prior to that he was an instructor at the Rimouski school.

He is a graduate of Quebec Seminary, where he obtained a Bachelor of Arts degree. Later he studied civil engineering at Laval University and subsequently turned to a seafaring life. He served as an officer aboard vessels of both Saguenay Terminals Limited and Canada Steamship Lines and was awarded his Master's Certificate, Foreign Going, in 1954.

The Coast Guard College will meet the growing need for deck and engineer officers for the expanding Coast Guard fleet. Selected cadets will be provided with free board and lodging at the college and will be paid \$75 a month and supplied with Coast Guard uniform issue while training.

Tuition at the college will cover academic, nautical and marine engineering subjects, these being combined with practical application of the training aboard Coast Guard ships. There will be courses in both French and English language, so that students will be able to assume their duties aboard any Coast Guard ship, whether it be manned by an English-speaking or French-speaking crew.

Forty officer trainees are to be chosen each year, the first group to begin training in September of this year as either deck officers or marine engineers. The course will be of four years' duration for candidates who by September 1 will have completed secondary school, (Grade 11 or 12, depending upon provincial standards).

The courses are designed to provide the academic knowledge required by an officer for obtaining, following required periods of sea experience, certificates of competency as master mariner on the navigation side and chief engineer on the engineering side. In addition, training will be provided in certain specialized skills required by a Coast Guard officer.

Slaght, Leslie, Ormsby Named District Marine Agents

Appointments of three district marine agents to fill vacancies at Victoria, B.C., Charlottetown, P.E.I. and Saint John, N.B. were made in March.

Lorence E. Slaght, formerly an engineer with aids to navigation division at headquarters, succeeds Col. K. Dixon, as district marine agent at Victoria.

Ian K. Leslie, engineer at Dartmouth District Marine Agency since November, 1960, is now District Marine Agent at Charlottetown, succeeding E. K. MacNutt.

Capt. Edward O. Ormsby, who has been District Marine Agent at Prince Rupert, B.C., goes to Saint John, New Brunswick

as District Marine Agent, filling the vacancy created by the untimely death last September of F. A. McKinnon.

Mr. Slaght joined the department as an engineer in 1948. From 1951 to 1958 he was district engineer at Charlottetown and in September was transferred to Ottawa. He is an engineering graduate of Queen's University.

Mr. Leslie graduated from McGill University in 1950 with a B. Eng. (Honours) degree. He entered the department as an engineer in 1956 and four years later was promoted to district engineer at Dartmouth agency.

Capt. Ormsby, a native of Ireland, is a veteran of service with both the Royal Canadian Air Force and the Royal Canadian Navy. He first served as instructor in navigation and aero engines at No. 2 Elementary Flying Training School, Port Arthur. He subsequently transferred to the Navy and became commanding officer of HMCS "Digby" in ocean escort duty and anti-submarine patrol.

He joined the department in 1950 as marine sub-agent at Port Arthur and in 1960 was appointed District Marine Agent at Prince Rupert. He is proficient in both English and French and also can converse in German and Arabic.

METS' DAILY DOUBLE

Every Day at 12 noon and 12 midnight, Greenwich Mean Time, meteorological technicians at 32 D.O.T. stations across Canada and at hundreds of other places all over the world do exactly the same thing: they release a balloon carrying a rugged but finely calibrated instrument called a radiosonde.

The balloons, filled with hydrogen, climb at a speed of some 1,000 feet per minute. As they rise they expand until they burst. This usually happens somewhere between 80,000 and 100,000 feet, two to three times as high as the jetliners fly. The balloons are about 20 feet in diameter then.

The radiosondes contain sending elements that measure the pressure, temperature and humidity of the air while they ascend. They also have small radio transmitters that continuously send the information back to a ground station.

Because the balloons drift with the wind as they rise, wind speed and direction at any level can be accurately calculated by tracking the course of the radiosondes.

The information is speeded via radio and wire to forecast offices where the results are analyzed.

The atmosphere up to 100,000 feet above the surface is really a comparatively shallow layer of air. If one were to make a small globe the size of an apple, this sheet of air would be represented by the skin.

The air, however, has no small weight and 9110 of the total mass of the atmosphere is compressed into this shallow layer. Most of the weather phenomena which affect man's day-to-day activities originate below 100,000 feet.

The radiosondes' twice-daily "eye-witness reports" of conditions in this upper atmosphere enable meteorologists to predict what they call "atmospheric flow patterns." These in turn form the main basis for the daily weather forecast.

Radiosondes may drift a long way during their 2-2½-hour climb and instruments have been found several hundred miles from their point of release. A paper-and-bamboo parachute is attached to the package, so that it will float down fairly gently after the balloon has burst.

However, since most radiosonde stations are at remote locations, very few instruments are recovered and the entire item is regarded as expendable.

In Canada the materials expended in upper air observations, including instruments, transmitter, balloon, battery, hydrogen and parachute, add up to a cost of about \$35 for each ascent.

Radiosondes are made to the department's own specifications and since the factory has to tool up specially for the manufacture of such a made-to-order item the meteorological branch buys the entire output at once. Placing large orders—usually a three-year supply—is also made necessary by the fact that far northern stations must have a two-year stock on hand in case the once-a-year supply ship misses it because of ice or storms. Weather is the meteorologists' stock in trade, but it can also work against them!

Early this year the department bought 84,000 radiosonde instruments from the Sangamo Company of Toronto, at a cost \$1,166,000. This was for the electronics only; balloon and parachutes were not included in this figure.

Each ascent is meticulously prepared and computed to get maximum value from it. Two men work about five hours to complete one upper air observation. This includes filling the balloon with hydrogen, monitoring the signals, computing and coding the data and checking the computations for error.

World attention has focused lately on earth satellites probing the outer fringes of the atmosphere, but meteorologists have been sounding the upper air for almost 50 years. Canadian investigations of the upper atmosphere have been going on for more than 30 years.

The early sounding devices included a smoked plate on which the data were registered. The instrument had to be recovered to get at the information.

Apart from balloons, kites have also been used to take instruments into the upper reaches. For a brief period in 1935 observations were taken by aircraft, but these rarely got above 20,000 feet.

P.E.I. District Marine Agent Retires

Erskine K. MacNutt, district marine agent at Charlottetown, P.E.I. since 1950, retired in March after 30 years with the department.

Born at Malpaque, P.E.I. in 1898, Mr. MacNutt served with the Royal Flying Corps in England during the First World War. He returned to Canada, resumed his education and graduated from McGill University as a civil engineer in 1924. During the following 10 years he worked as field or resident engineer of construction jobs in Prince Edward Island, New Brunswick and Quebec.

In 1935 Mr. MacNutt joined the Charlottetown Marine Agency as superintendent of lights. In 1947 he was promoted to district engineer and in 1950 to acting district marine agent. The following year he became district marine agent.

The retiring agent is past president of the Association of Professional Engineers of P.E.I., of the P.E.I. Engineering Institute of Canada and of the P.E.I. Fish and Game Association.

He is married and has two sons, one completing his final year of Law at the University of New Brunswick, the other in his final year of Arts at Dalhousie University, Halifax.





The spacious waiting area and the mezzanine overlooking the aircraft ramp at London Airport.

London, Ontario, Air Terminal Opening

While a capacity crowd of 500 enthusiastic citizens applauded heartily, Transport Minister Pickersgill declared the department's new London, Ont. air terminal building officially open on April 10.

The opening ceremony, held in the building's spacious main waiting room, was based on the theme "Industry and Education", as befitted the progressive Western Ontario city's status in both realms. Mr. Pickersgill, wearing the "hard hat" of industry, was presented with a certificate of honor by Dr. G. E. Hall, president of the University of Western Ontario, in his capacity as a leading figure in the field of education.

George Scott, assistant deputy minister, air, presided as chairman of the gathering and Deputy Minister John R. Baldwin headed the party of headquarters officials.

The new terminal was built at a cost of \$1,000,000 and incorporates the latest concepts of air terminal construction. It was designed by the firm of Blackwell, Hagarty and Buist of London, in co-operation with the department's own architects, and was built by W. A. McDougall Ltd. of London.

Related facilities such as aircraft parking apron, taxiways, lighting, roads and car park cost an additional \$565,000.



Transport Minister Pickersgill (left), accepts a scroll of honor from University of Western Ontario President Dr. G. E. Hall. Platform guests included: J. D. Umphrey, president of the London Chamber of Commerce, Mayor F. G. Stronach of London; George Scott, assistant deputy minister, air; J. A. Irvine, M.P.; Hon. G. E. Halpenny; Reeve D. Patterson; Gordon Wood, senior vice president, sales, Air Canada; Frank Young, regional operations manager, Air Canada; John White, M.L.A., representing Premier Robarts; C. E. Miller, M.P.; W. H. A. Thomas, M.P. and Airport Manager Norman Craig.



Canadian Coast Guard sailors and other D.O.T. personnel in Canada's remote northern outposts will be on the receiving end of the CBC's new short wave program, "Arctic Patrol" this summer.

Les marins de la Garde côtière canadienne et les autres employés du ministère des Transports affectés à des postes isolés dans les régions septentrionales du Canada pourront écouter cet été la nouvelle émission "La ronde de l'Arctique" diffusée sur ondes courtes par Radio-Canada.

CBC to Launch "Arctic Patrol" Program in Co-Operation with D.O.T.

The Northern Service of the Canadian Broadcasting Corporation in co-operation with the Department of Transport will broadcast a Monday-through-Friday radio program called "Arctic Patrol". It will begin Monday, June 28, 9:15-9:30 p.m. Eastern Daylight Time and end Friday, October 15.

It will be transmitted via CBC Shortwave on 15320 kilocycles (19.58 metres) 11720 kilocycles (25.60 metres) and 9625 kilocycles (31.17 metres).

Families and friends of ships' crews are invited to write their personal messages, limited to a maximum of 25 words (but no limit to the number of messages) in care of "Arctic Patrol", CBC Northern Service, P.O. Box 6000, Montreal. Messages will be broadcast in the language in which they are written.

The program will also feature daily reports on the positions and activities of Canadian Coast Guard icebreakers and other ships during the summer navigation season.

Radio-Canada inaugurera l'émission "La ronde de l'Arctique" en collaboration avec le ministère des Transports

Le Service du Nord de la Société Radio-Canada, de concert avec le ministère fédéral des Transports, diffusera une nouvelle émission radiophonique d'un quart d'heure intitulée "La ronde de l'Arctique". Programmée du lundi au vendredi à 9h. 15 du soir, heure normale de l'Est, cette émission commencera le 28 juin et prendra fin le 15 octobre.

Elle sera transmise sur ondes courtes sur les fréquences de 15320 kilocycles (19,58 mètres), 11720 kilocycles (25,60 mètres), et 9625 kilocycles (31,17 mètres).

Les parents et amis des équipages de navires sont invités à adresser autant de messages personnels qu'ils le désirent, ne dépassant pas 25 mots, aux soins de l'émission "La ronde de l'Arctique", Service du Nord, Radio-Canada, Case postale 6000, Montréal. Ces messages seront diffusés dans la langue même de leur auteur.

L'émission comprendra aussi des rapports quotidiens sur la position et l'activité des brise-glaces de la Garde côtière canadienne et d'autres navires pendant la saison de navigation d'été.

Significant Changes in Award Program Announced

In March the Suggestion Award Board of the Public Service of Canada announced a new plan to replace the 13-year-old Suggestion Award Program.

The Incentive Award Plan, as it will be known, offers greater benefits to employees in recognition of their proposals for increased economy and efficiency, for long service and for outstanding achievements.

Specifically, it provides for (1) suggestion awards with a cut-off level of participation (2) a merit award program (3) a long service award program and (4) an outstanding achievement award program.

working conditions will result in cash or merchandise awards of an amount determined by the value of the suggestion to the department.

Determining a cut-off level to distinguish eligibility was difficult. It was found that the most practical means would be a salary level. Employees whose salary maximums are higher than \$7,710 will no longer be eligible to participate in the suggestion award program, with the exception of members of the Canadian Coast Guard. All ships' crews will continue to qualify, but not ships' officers.

Merit Awards

This part of the Incentive Award plan is an innovation. It enables management to recognize employees at any level for performance or contributions of unusual value to the operations of the department or improved service to the public. Under this program awards up to \$1,000 in cash, along with a citation, will be granted.

Long Service Awards

Introduction of awards for recognition of 25 years of public service fills a need not fully met by similar departmental programs. Some departments, including Transport, have been granting token awards for long service, but recipients must have spent all or at least part of their service with the department granting the award. Under this new plan every employee who has completed 25 years as a public servant will be given a pin or brooch.

Recent winners of suggestion awards include L. E. Murphy of Saint John District Marine Agency who earned a \$50 award. A personnel officer, Mr. Murphy recommended that the department discontinue issuing blue drill trousers to Canadian Coast Guard stewards. He pointed out that while on duty stewards wear white clothing and seldom if ever have occasion to wear the two pair of blue trousers issued. It was estimated that approximately \$500 a year will be saved by this suggestion.

Other winners:

NAME	POSITION	LOCATION	AMOUNT
Johann Bachinger	technician, electronics	Montreal	\$25
John N. Clarey	meteorological technician	Halifax	\$20
John G. Fox	communicator	Moncton	\$20
John A. Furlong	fire fighter	St. John's, Nfld.	\$10
D. L. Greene	radio operator	Comox, B.C.	\$20
			\$15
J. J. Jarvis	radio operator	Stirling, Ontario.	\$10
Nathaniel Jones	packer	Met. headquarters	\$10
Nelson Lane	fire fighter	St. John's, Nfld.	\$10
John McCallum	storeman	Met. headquarters	\$10
Walter Morgan	fire fighter	St. John's, Nfld.	\$10
H. G. Perkins	radio operator	Kingston	\$30
W. R. Purdie	meteorological technician	Sept-Iles, P.Q.	\$10
E. D. Redden	technician, electronics	Chester, N.S.	\$10
			\$15
E. R. Searle	radio operator	Port Arthur, Ont.	\$10
E. M. Warren	clerk	Winnipeg	\$10

Cross-Canada Dateline

Ottawa—During past months many headquarters staffers—from marine and air services alike—enrolled in extra-curricular courses. Some 120 from air services and 32 from marine signed up for a 15-week extension course in Effective English for business and professional people at Ottawa's Carleton University, while 52 others took an eight week St. John Ambulance course in the Fundamentals of First Aid.

The English course, conducted by Mr. and Mrs. H. Roodman, stressed correspondence and grammar. Marine personnel took the course in the Fall, while air services people began in January. They attended two-hour sessions once a week and were required to do several assignments. Classes were made up of 18 students each and took the form of workshops, with time devoted to constructive criticism. Enrolment in the course was approved initially by the department and all who successfully completed it were reimbursed 50 per cent of the cost.

The First Aid course was given during office hours, under the auspices of the emergency health division of the Department of National Health and Welfare. Data Processing's Margaret Quinney and telecom's Ray Amos were the instructors. Both trained at the Civil Defence College, Arnprior, Ontario.

The course was comprised of a series of lectures covering treatment of wounds, fractures, burns and other miscellaneous emergencies, including three methods of artificial respiration.



Ottawa—Presentation of awards to Canadian Government winners of the International and Government of Canada annual fire prevention contest took place at the Parliament Buildings early in March.

Above Mr. Jean-Charles Cantin, M.P., Parliamentary Secretary to the Minister of Transport, presents the D.O.T. award certificate to Mr. W. G. Anderson (right) acting chief, airports and property management. It was awarded for the entries of Edmonton International, Moncton, N.B. and Torbay, Nfld., airports.

Prince Rupert, B.C.—Early in March the CCGS Skidegate was put into service carrying rescue crews and survivors from the avalanche-stricken camp site at Granduc Mine near Stewart, B.C.

In the photo at left some of the 54-man rescue crew, made up of Royal Canadian Engineers from Chilliwack, B.C., R.C.M.P. and Granduc employees, are seen aboard the Skidegate as she docked at Seal Cove six days after the avalanche which took 26 lives. The vessel is designed to accommodate two passengers, but for this trip 17 were on board.



Ottawa—A letter postmarked Pangkajene, Indonesia and received by Information Services left us a little puzzled.

It read:

DEAR GENEROUS SERVICEMAN,

You will excuse my troubling you with this letter, in which I am going to ask you a great favour. I have write this letter, for long since I had been reading from books and scenic about your Airport and recently have a look at film. They are very famous and modern in the world.

I want to study and knew of the Canada International Airport from all kinds of Airport.

There is my first hobby to collect the photographs models of plane from your Airport.

I shall hang them on the walls and they make my room like a part of your Airport.

I am enjoy with your information of your edition books. And I shall contribute my school library, if you can send me your materials. Which I shall tell

my all friend in Indonesia, for they are all fons of then too.

Please favour me with a reply at your early convenience. I should be very much obliged to you, if you would comply with this request. I shall be only too pleased to show you my gratitude by reciprocating your kindness.

I thank you from the bottom of my heart for your great kindness and shall regard this keepsake as a lasting token of our friendship.

Believe me Sir, yours very sincerely,

BOEN JOEN NGIAT

Ottawa—At the Air Services School at Ottawa airport courses go on 12 months a year. One, held during January and February, brought together 20 lightkeepers from as far apart as Langara Island, B.C. and Camp Island, Nfld. The seven-week annual course stresses instruction in radio beacon operations and maintenance. W. N. Carrothers and F. H. Pickel of the school's staff were the instructors. Lightkeeper J. R. Bonisteel, of Port Colborne, Ont., was moved to verse during the course:

THE CLASS OF '65

In January of '65

The D.O.T. School came alive.

The Lightkeepers from sea to sea

Had come to take a course you see.

Carrothers and Pickel were the pick

To teach us all about "Lectronics".

Though they gave their best instruction

They've often been driven to distraction.

There's been so many dumb questions

But they've helped us with our lessons,

and if at first we can't catch on

I'm sure we have all been trying.

Now the course will soon be done

And the boys have had their fun,

Along with Ohm's and Kirchoff's Law

We'll all remember Ottawa.

So we're going back to keep

The ships sailing through the deep,

And if "Pickel and Carrothers" do

survive

They'll remember the class of '65.

Cold Lake, Alberta—This quartet of curlers from the Edmonton area control centre walked off with first prize in the "B" event of the 10th Annual Cold Lake "Palmspiel". In addition to trophies, each man received a Marlin automatic rifle with telescopic sight.

This is the fourth consecutive year that the rink, skipped by Gordon Jones, has finished "in the money" at Cold Lake. Left to right are air traffic controllers Irv Schaefer, lead; Joe Kovalenko, second; Bill Holt, third and Gordon Jones.



Rescuers carry Louise Sacchi from the boat on the airport side of Gander Lake several hours after her twin engine plane crashed. Left to right: Jim Noel, D.O.T.'s Ches Pittman, Sgt. Jack, Miss Sacchi, boat owner Eric Crewe and Gerry Granter.

D.O.T. Employees Aid in Rescue

On January 26 51-year-old Louise Sacchi, enroute from Boston to Germany via Gander, crashed her twin engine Beach Barron aircraft five miles south of Gander Airport. She was attempting a landing when she run into difficulty.

Minutes after the crash the lady aviator established radio contact with Gander control tower and rescue operation's got under way immediately.

A rescue team was made up of people

from D.O.T., RCAF, RCMP and local citizens.

When they reached Miss Sacchi four hours after the crash they found her in high spirits with only minor cuts and bruises. She was given food and clothing and carried through the wilderness to the boat.

A veteran pilot with many Atlantic crossings to her credit, Miss Sacchi was released after a few days in hospital none the worse for her close brush with death.



Canadian Coast Guard ALBUM



CCGS Sir William Alexander—A light icebreaking supply and buoy vessel, completed at Halifax Shipyards, Halifax, in June, 1959; operates in East Coast and Gulf of St. Lawrence waters.

ccgs Sir William Alexander

LENGTH: 272 feet, six inches

BREADTH: 45 feet

DRAFT: 17 feet, six inches

POWER: Diesel electric

POWER: Four eight-cylinder opposed piston diesel generator sets driving two electric propulsion motors, each of 4,250 shaft horsepower; twin screw

GROSS TONNAGE: 2,154

Ref. 1000

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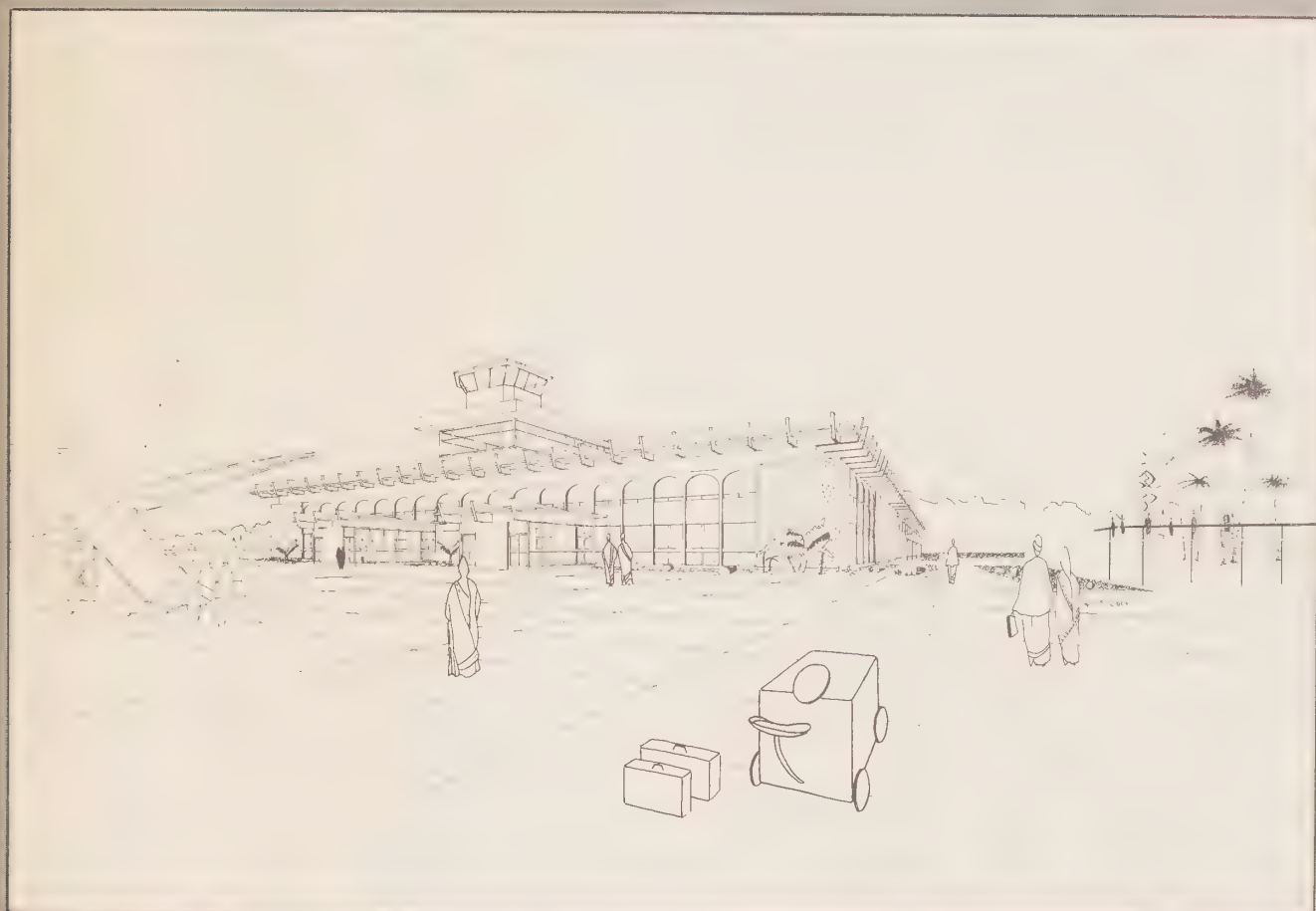
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• AIRPORT HALFWAY ROUND THE WORLD

• SEA-GOING "HOUSEKEEPERS"

VOLUME 16 • NO. 4
 JULY-AUGUST 1965 • OTTAWA

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COVER

Architect's sketch of terminal building now under construction at Katunayake Airport in Ceylon. See story "D.O.T. Builds An Airport Halfway Round The World" on page 5.

EDITOR

Yvonne McWilliam

NEWS ON THE DOT is a Department of Transport staff magazine published under the authority of the Minister, Hon. J. W. Pickersgill, by the Information Services Division.

This is your last notice.

If replies are not received within seven days, drastic action will be taken without further notice.

Although this sounds like a demand note from a creditor, it's really more like a stockholder's notice. The company's name may be changed.

Remember how we invited new name suggestions for News On The DOT? Few have been forthcoming.

Now we are going to take our awesome discretion in our hands. The only way to head off the headstrong is to write. The target of your accolades or abuse is "The DOT."

Unless we hear from you before the next issue, we are going to have our own way. Then we'll have no one to blame. Won't you help us out?



From the Deputy Minister's Desk

Le mot du sous-ministre

Yesterday I asked my wife what group of Department of Transport personnel received the smallest recognition for the largest job. I had in mind the obvious fact that in a large organization there are always some persons and some branches that receive far more publicity than others; yet the success of the departmental operation, as a whole, depends on the co-operation and effort of every staff member—the unsung as well as the sung heroes. Her reply: “The wives of departmental employees”.

This brought to my mind the fact that they, too, play a major role in the success of our efforts. To all wives and families, best wishes for a very pleasant summer season!

J'ai demandé hier à mon épouse quel était, à son avis, le groupe d'employés du ministère des Transports qui accomplit les tâches les plus importantes mais dont les efforts reçoivent le moins de publicité. J'avais à l'idée le fait évident qu'au sein d'une grande entreprise il y a toujours certains employés et certains services dont l'activité est mieux connue. Mais il reste que l'ensemble du travail du Ministère est couronné de succès si chaque membre du personnel, les héros connus comme les héros anonymes, y collabore activement. Elle m'a répondu: “Les épouses des fonctionnaires.”

J'ai alors reconnu que ces dames contribuent également de façon importante à la réussite de nos entreprises. Je souhaite à toutes les épouses et à leur famille de passer un été des plus agréables.

J. R. Baldwin



Aerial view of Katunayake Airport showing cleared terminal site in right foreground.

D.O.T. Builds an Airport Halfway Round the World

by Yvonne McWilliam

It's a long way from Katunayake to Ottawa and Winnipeg, but helping to smooth the way are the Colombo Plan, D.O.T. and an enterprising Winnipeg construction firm.

The job is to rebuild Ceylon's major airport at Katunayake, 17 miles from the capital city of Colombo. The builders are:

- Canada, which is paying \$3.6 million of the total \$5.5 million cost;
- Ceylon, which will pay the balance;
- British American Construction and Materials of Winnipeg, Ltd., general contractors engaged on their first international project.

For several years the Ceylonese government knew its 6,000 foot runway at Katunayake Airport, built in 1942 to resist Japanese invasion, was too short for jets. Two years ago BOAC announced its intention to put VC 10 jets into service in October 1965 and Ceylon didn't want to be bypassed by international commercial and tourist traffic. They requested foreign aid to get the project started.

Canada was asked, as a Colombo plan member, to play a major role in the terminal and runway rebuilding. In turn, D.O.T., as the builder of Canada's up-to-the minute international airports, was asked by the External Aid Office of the Department of External Affairs to make an engineering study of the project.

In January 1964 D. A. Lane, D.O.T.'s chief engineer, airport development, spent two weeks in Ceylon to find out the scope of the job, to line up preliminary cost estimates and to set up methods of tendering, contract administration and phasing to ensure that the runway portion of the work would be finished by 1965.

Results of Doug Lane's findings went into a comprehensive 80-page report which included estimated costs based on two

different plans, details of the Ceylonese labor situation, wage scale, harbor facilities and charges, scale drawings, water tables, soil analysis charts, load bearing tests and dozens of other facts.

He found it would cost approximately \$5½ million to renovate the runway system and build a suitable terminal. The External Aid Office accepted the report and tenders were called in May 1964 from nearly a dozen Canadian contractors. (In order to bid on such a contract a firm must have completed a comparable runway project in Canada during the previous five years.) The contractors, from across the country, were then briefed on the scope and conditions of work. An opportunity was given each to investigate on-site conditions.

In some instances local methods of transportation are used to move construction materials, such as this ox and cart, but at the airport site modern machinery does the job.





Left: The brute strength of elephants proved to be the best way of clearing coconut trees away from terminal area. Centre and right: Ceylonese laborers gather sand for concrete mixture from bed of nearby river; however power machinery was used for most of this work.

Before tenders were called, Don Boyd of air services construction branch was appointed project manager. As recommended in the initial report, he left for Ceylon before the contractors were to arrive to examine the site.

In July, 1964 the contract for the runway was awarded to Tallman Construction Company of Winnipeg (the firm recently changed its name to British American Construction and Materials of Winnipeg Ltd.) It would take several months to get material and equipment from Canada, but the firm hired local subcontractors to start clearing the runway area right away, making use of every minute in their race with the VC 10's.

The runway work had to be completed in 15 months for BOAC's proposed service, but the terminal building could not get under way as quickly. (Terminal tenders are to be called early in August for completion in 1968.)

Architect Emile Daoust, D.O.T.'s chief architect, standard terminals and general buildings, spent several weeks at Katunayake Airport this past May and June checking final estimates for the \$2½ million terminal. It will include the most up-to-date customs facilities, air-conditioned offices, restaurant, VIP annex and support facilities such as telecom and air traffic control. The proposed building will be about half as big as Ottawa International Airport terminal.

The airport job marks the first time the Winnipeg runway contracting firm has operated outside of Canada. Pleased with the undertaking to date, the firm is considering bidding for other international construction jobs.

Building an airport outside of Canada has involved more than the contractor's complex movement of machinery, material and supplies from Canada to Ceylon. It has meant a particularly heavy administrative load must be borne by D.O.T.'s project manager and his colleagues in Ottawa.

Although several headquarters staff have been intimately concerned with the Katunayake project one very busy man has been headquarters engineer Peter Hodgins who, as co-ordinator of the entire project, can point to a bulging file of more than 1,400 items of correspondence, mainly exchanged between Ottawa and Don Boyd, in less than a year—more than five per working day!

In a large-scale project such as this, even the regions have had an opportunity to participate. Both Montreal and Van-

couver region staffs have been kept busy with shipping details. Eric May of Vancouver Region carried the lion's share of the load of getting three chartered shiploads of cargo away in good time and good shape.

A job halfway around the world, 24 flying hours from the contractor's Winnipeg headquarters, has posed a number of special problems, not the least being the devising of an efficient way to transport materials to the 200-by-400-mile island member of the Commonwealth. It was decided to use Ceylonese subcontractors and laborers, but to send supervisory personnel, machinery and material from Canada.

Two of the contractor's senior officers went ahead to Ceylon to get things moving and gradually 12 supervisory employees were assigned to remain until the work is completed. About 350 local laborers have been hired.

A million and a half dollars worth of equipment was shipped from Canada to Ceylon in what was called the most complicated shipment ever loaded at Vancouver harbor. It consisted of 1,000 tons of equipment including a giant 50-ton packer, three 15-ton rock wagons, a dragline, 35 3-ton dump trucks, half-ton trucks, station wagons, tractors, 4-wheel trailers, conveyors, concrete spreaders and finishers, generating plants, and assorted other machinery. All this, along with 800 long tons of asphalt, some 7,500 long tons of cement, plenty of explosives and two ice-making machines for a fish storage plant also being constructed in Ceylon under the Colombo plan, was stowed aboard the 10,000 ton Liberian vessel s.s. "Evangelistria" which sailed November 27, 1964.

The ship arrived in Colombo Harbor on January 10. Because of local labor problems it took nearly three months to unload her—three times longer than expected—but out at the airport site clearing and fill operations continued.

Unloading techniques and unfamiliarity with the palletized packaging of Canadian cement caused extensive damage to the cargo, but the contractors were able to effect repairs, mainly out of spares which had been included in the cargo, and not lose valuable working time.

Two more shiploads of cement left Vancouver early in the Spring. The "Melida" and the "Trojan" carried a total of 16,000 long tons, along with a cobalt therapy unit from Atomic

Energy of Canada and 3,000 tons of flour, Canadian items bound for Ceylon under the Colombo plan as well as other goods for the runway contractor and materials to get the terminal work underway.

At the site Don Boyd is assisted by Maurice Sacco of Foundation of Canada Engineering Company Limited, and by a secretary, an accountant and some 30 technicians and surveyors. With the exception of Don and Maurice, the staff are Ceylonese. There is no language barrier though. The official language of the country is Sinhalese, but day-to-day business is conducted in English.

Work methods, however, are sometimes different to the North American way. In one case, on the advice of a Ceylonese subcontractor, elephants replaced bulldozers to clear 150 acres of coconut trees.

Laborers earn about a dollar a day (paid in rupees, the local currency) while equipment operators receive about \$1.25. In figuring out the number to employ on a job as large as Katunayake Airport, it was estimated that twice as many as would be needed on a comparable job in Canada should be hired, because, being less skilled, per-man productivity would be lower. On-the-job training was necessary to ease workers into new methods and the use of new equipment. Once trained, the contractor finds them to be very good workers.

Misunderstandings, however, can happen. One truck driver was told to load a 100 h.p. electric motor on a dump truck, take it from the dock to the quarry and "dump" it. What the Canadian foreman meant was to unload it at the quarry, but the driver, not being a student of semantics, did exactly as he was told. He loaded the motor onto the truck, drove to the edge of the quarry, pressed the hydraulic switch and the brand new motor slid several feet down into the quarry and landed upside down.

Incidentally, Mahari quarry, where all crushed stone for various phases of the construction is obtained, is where part of the Hollywood movie "Bridge on the River Kwai" was filmed. It is 17 miles from the airport site.

D.O.T. Project Manager Don Boyd shows visiting group around runway construction site. In the photo at left are: G/C Stewart, commanding officer, Royal Ceylonese Air Force; W. M. Atkinson, office manager for Winnipeg contractor; G. K. Grande, Canadian High Commissioner to Ceylon; Don Boyd and Maurice Sacco,

Don Boyd recounts some unusual happenings he has experienced by being an "international civil servant". Personnel techniques are not quite so sophisticated as here in Canada, for instance. When interviewed for an office position, one applicant cited his fine cricket record as proof of his ability to do the job. Firing, too, can be complicated, reports Don. It can turn into a family matter. More likely than not a released employee will be back at the site the day after with his whole family in tow—from grandparents to children.

Ceylon's tropical climate presents certain problems—at least for the Canadians who are unaccustomed to the high humidity and the fairly constant temperatures varying only between 75 and 90 degrees.

Torrential rainfalls (up to seven inches in a four-hour period) that come with the monsoons and occasional typhoon weather dictated the design of the terminal building roof. At times the rain has held up work, but fortunately, the light sandy soil absorbs the surface water fairly quickly, minimizing drainage problems and delays.

All electrical gear, such as runway lighting, has been "tropic-proofed" by special moisture-proof seals of rotproof materials or by galvanizing. Cement and other materials are carefully protected from the elements—at least as much as several thousand tons of anything can be protected. As well, since climatic conditions are such that plant and fungus growth thrives, the surface concrete of the terminal building is to be treated with waterproofing and fungicidal solutions.

Personnel needs vary too. Don Boyd sleeps in a hammock for maximum ventilation and also has been provided with window-type room air conditioners. (Nobody who has visited him at the site begrudges him these!)

Despite difficulties, work on the runway extension was about two thirds finished by the end of July, 1965—ahead of target. It looks like it will be clear runway from here on and the main runway will be re-opened to accommodate BOAC's VC 10's by early August. The entire runway contract will be completed by the end of October.

assistant project manager. In the photo at right Mr. Boyd and Mr. Grande discuss differences between construction work in Canada and those in Ceylon, while G/C Stewart takes a close squint out over runway.



Sea-going "Housekeepers"



HERE'S THE PROPER WAY TO DO IT—Chief Steward James Coleman of CCGS "John A. Macdonald" shows Gregory MacMullen of North Sydney how a table napkin should be folded when setting a formal table. At left are Captain's Steward David Sanderson of Dartmouth and Purser R. Hughes.

by Ken Parks

A seafaring life, as generally pictured by shore-bound land-lubbers, has to do with plenty of yo-heave-ho stuff, ringing engineroom telegraph bells, porting the helm and similar hairy-chested activity.

There's more to running a fleet than meets the eye, however. In the Canadian Coast Guard, as in any other fleet, there's a quiet and business-like side to shipboard life that is just as vital to the service as the better-known activities of the deck and engineroom staffs.

The days have long gone by when a ship could be run with a supply of hardtack, rum, and a burly bosun wielding a belaying pin to keep malcontents in line. Provision of the meals, housing and other services needed to keep crews fit and happy is a business which compares with the operation of a sizeable hotel. The men who attend to these operations are, in large measure, an "unsung service", most of whom possess special skills and training for their work.

For example, "housekeeping" aboard the fleet's largest ice-breaker, CCGS "John A. Macdonald", commanded by Capt. Paul Fournier, keeps a large staff busy around the clock.

The ship's company aboard "John A." can number, at peak, 130 persons. The job of catering to their needs is a big one.

The same job is carried out aboard all the other ships of the fleet, though the housekeeping staff diminishes in size in proportion to the size of the vessel, to the point where in the smallest ships it may be a one-man operation.

Heading this area of shipboard operations for the "John A. Macdonald" is Purser R. Hughes, who has been with the department since 1952. Next in line is Chief Steward James Coleman, who similarly possesses a wealth of experience in his chosen field of work with internationally-known shipping firms. He has been around the world 11 times.

Working under their watchful and meticulous eyes are Ship's Clerk E. George, Storekeeper Ted Richard, Assistant Chief Steward Greg MacMullen, Chief Cook R. Tulloch, and the stewards, waiters, cooks, messmen and cabin boys who comprise the remainder of the housekeeping staff.

Purser Hughes is responsible to the Captain for all matters concerning catering, messing, housekeeping and storekeeping, including such items as canteen supplies, uniforms, loan clothing such as a protective clothing and special winter gear. Also within the sphere of him and Mr. Coleman are ship's business correspondence, accounting, personnel records, cargo documentation, on-the-job training, discipline, leave schedules and related matters.

The "John A. Macdonald's" total inventory of ship's equipment and consumable supplies runs around \$1,000,000. That's "big business" in anyone's books. There is a once-a-year stock-taking of supplies other than provisions and perishable goods, of which there is an inventory twice a year. Every month the purser prepares a financial statement covering provisions expended.

Messrs. Hughes and Coleman are both well versed, as are their counterparts aboard other Coast Guard ships, in the fine points of producing suitably-laden and decorated tables for formal functions. From time to time the ships, particularly the larger ones, carry officials from other government departments or from foreign countries who are concerned with D.O.T. business. On these occasions, like last March when a delegation of Russian icebreaking experts were aboard the CCGS "John A. Macdonald", the ships' pursers and chief stewards provide fare that is equal to the finest to be found ashore.

To ships' crews, who often are at sea for long periods at a time, good food is essential.

Aboard more and more ships of the Coast Guard fleet serving of crews is cafeteria style. It has been found that less food is wasted this way. Quality, though, is the keyword and the chief steward and chief cook are concerned at all times with serving food equal to that of any good city restaurant.

Purser Hughes formerly was chief cook on the weathership "St. Catharines" in the Pacific Ocean and before that was with the Atlantic Shipping Company, Montreal, and with the Canadian National Steamships on the West Indies run. He became a chief steward in the Coast Guard fleet in 1954 and in 1960 took top honors at the course for stewards at HMCS "Hochelaga", Montreal. In 1962 he took a senior stewards' refresher course and last year attended the three months' supply officers' conversion course.

Mr. Coleman is a native of Grimsby, England and for 30 years was with the Furness Withy Line, serving at various times as chef, steward and headwaiter. In 1957 he worked in Newfoundland and in 1958 he joined the Department of Transport, serving aboard CCGS "Labrador" as captain's steward. In 1962 he transferred to CCGS "John A. Macdonald".

A stickler for provision of service with a capital "S" in all matters within his domain, Mr. Coleman has several stewards-in-training working under his skilled supervision. The knowledge acquired in long years aboard fine passenger liners is being passed on to a new generation who, in time, will be the chief stewards and pursers of the Canadian Coast Guard.



Top: BALANCING THE BOOKS—Purser R. Hughes, background, and Ship's Clerk E. George check the ship's supply accounts.



Centre: CHECKING SUPPLIES—Ship's Storekeeper Ted Richard takes stock of the food supplies in one of the storerooms aboard CCGS "John A. Macdonald".



Left: WHAT'S COOKING?—There are tasty treats in store, when Chief Cook M. Tulloch and Night Baker Gerard Fougere get busy in the galley. Good food is a "must" aboard all Canadian Coast Guard ships.



The N.B. McLean breaking out the north entrance of Port Arthur harbour on April 21.

There was Ice on the Lakes

by F. K. McKean,
District Marine Agent,
Parry Sound, Ontario

For D.O.T. icebreakers the situation changes each year. It is like a game of Russian roulette with one never knowing where the little ball will stop. In icebreaking there's no telling where the ice jams will be in the spring. Some years the big trouble comes in the Arctic, other years in the Gulf, and sometimes in the St. Lawrence River. This year the loaded chamber came up opposite the head of the Seaway system, in the Upper Lakes.

This past winter at the Lakehead the weather was bad. The thermometer dipped to its lowest in a 100 years and in Whitefish Bay at the east end of Lake Superior, and in Georgian Bay at the east side of Lake Huron, the prevailing westerly winds piled up huge windrows of ice. The severity of the situation was apparent by February 22, when the CCGS "Alexander Henry" was sent out to break her way from Parry Sound to Midland across Georgian Bay. She spent an ineffectual week battling a gigantic windrow off Hope Island. In March she went back for another try but didn't break through to Midland Harbor until April 15, and then only by a circuitous route which was of little service to commercial vessels.

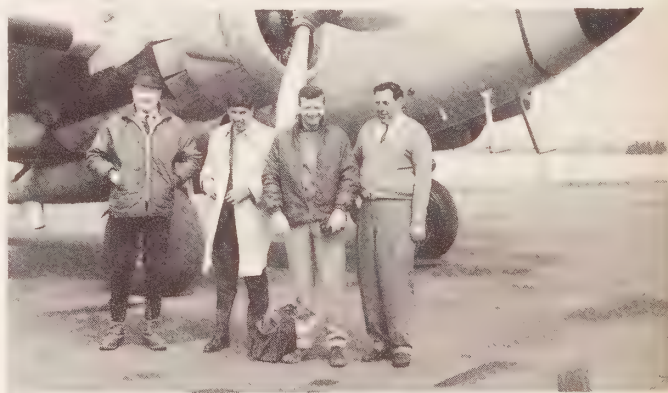
That ice windrow at Hope Island was a dandy—although it had been cut by several passes of two icebreakers, and by 19 commercial vessels, it was still in place and holding up ships on May 5.

The Parry Sound Agency had advised Headquarters of the situation and the famous old icebreaker of the St. Lawrence, the "N.B. McLean", was dispatched the 700 mile distance to help out.

The "McLean" began her attack on the ice at Hope Island on April 16. Like the "Alexander Henry" she found it too much for a frontal attack, so Captain Gagne turned the ship and went into the barrier stern first, chewing up the stubborn ice with the ship's wheels. The breakthrough came on April 21.

It took five ships, working hundreds of miles apart both sides of the U.S./Canada border to open up the 1965 navigation season on the Upper Lakes. The U.S. Coast Guard "Woodrush" kept the channels open at Duluth, the CCGS "N.B. McLean" performed the same service at the Canadian Lakehead, the U.S. "Mackinaw" and "Naugatuck" cleared the channels in Whitefish Bay above Sault Ste. Marie, and CCGS "Alexander Henry" freed the winter fleet in Georgian Bay.

The success of this operation may be gauged by the fact that three days later, by midnight April 24, 203 vessels had passed upbound and downbound at Sault Ste. Marie, the world's busiest shipping channel.



District Marine Agent McKean with members of the meteorological service ice reconnaissance patrol at Fort William on April 14. Left to right Mr. McKean, John Cote, Jean Lafontaine and Doug Madden.



Photographed at the May RDAS's Conference are, left to right, seated: T. G. Howe, regional director, Vancouver; George Scott, assistant deputy minister, air; J. R. Baldwin, deputy minister; and J. Roy Baxter, assistant deputy minister, personnel. Back row: J. R. Noble, director, meteorological branch; M. Baribeau, regional director, Montreal; J. A. Lenahan, regional director, Moncton; W. E. Fenn, regional director, Winnipeg; D. P. Glen, regional director, Toronto; G. E. McDowell, regional director, Edmonton; and F. G. Nixon, director, telecom. and electronics.

RDAS's Hold First Ottawa Conference

During the week of May 17 the regional directors of the six air services organizations met with headquarters officials for four days of formal and informal discussions covering topics of mutual interest.

Deputy Minister J. R. Baldwin spoke to the group early in the week. He pointed out that the conference was taking place at a time when many changes in financial and personnel administration are being implemented throughout the government and it is important that the department's senior officers be conversant with such changes. Further on he mentioned that more and more emphasis is being placed on the integrated

approach to transportation, as recommended by the MacPherson Royal Commission Report on Transportation. As the department continues to grow and expand it will play an ever-increasing role in the nation's transportation and the approach must be to consider the field as a whole—what applies to air affects marine and vice versa. This includes high level communication matters as well as other transportation functions.

Before winding up the successful week the regional directors were guests of honor at a dinner at the Beacon Arms hotel. The event was attended by the Minister, the Hon. J. W. Pickersgill, and some 75 headquarters personnel.

Retirements—



Assistant Deputy Minister, Marine G. Stead (left) presents engraved watch to Addison K. Laing, retiring chief of aids to navigation. Mrs. Laing received a bouquet of roses.

Addison Laing

Addison K. Laing, chief, aids to navigation, retired at the end of May after 35 years of government service.

Born at Hamilton, Ontario in 1905 Mr. Laing attended public and secondary schools in that city. In 1930 he graduated

from McGill University with a degree in civil engineering and joined the hydrographic survey section of the Department of Marine. During the next five years or so he came to know Canada well as he spent the surveying seasons out in the field in

Hudson Bay and Strait, on the East Coast, and in the North West Territories and Western Provinces. In 1936, the year the newly-created Department of Transport took over Department of Marine duties, he was promoted to engineering assistant in the Commissioner of Lights branch.

Mr. Laing spent the war years assisting in the conversion of Prescott Agency shops to mass production of naval stores and was in charge of procurement of materials to fill contracts issued through the Department of Munitions and Supply.

After the war the department launched an extensive program of reconstruction or repair of all lighthouses, many having deteriorated badly due to depression economics or wartime building restrictions. Mr. Laing was very active in this long-term project which will soon be completed. In 1958 he was appointed Chief, Aids to Navigation, the position he held at the time of retirement.

Friends and colleagues from throughout headquarters gathered in the Hunter Building Library on May 27 to offer best wishes to "Addy" Laing prior to his retirement. Assistant Deputy Minister, Marine G. W. Stead presented him with an engraved watch and a wallet and offered best wishes. Mrs. Laing received a bouquet of roses.

Peter Davies

Peter Davies, inspector of radio regulations at Vancouver, retired in March after 40 years of government service.

Mr. Davies' communications career began when he served with the 4th Canadian Engineers Brigade in France during the First World War. In 1925 he joined the government service as a radio operator and served at several coast stations in British Columbia. In 1930 he helped with the construction of the D.O.T. station at Coppermine and remained there for two years. In 1946 he assumed the duties of radio inspector at Vancouver and remained there until his retirement.

Friends and co-workers honored Mr. Davies at a gathering and presented him with an engraved watch and a power sander.

Donald Mitchell

Donald Mitchell, a veteran of 38 years of departmental service, retired in April. He was inspector-in-charge of the Victoria radio regulations office.

Mr. Mitchell's career in radio dates back to the First World War when he served as a radio operator with the British Merchant Naval Supply Service. He made many trips in the Mediterranean area and



An engraved watch and a power sander were presented to Peter Davies prior to his retirement. Admiring the gifts are, left to right: B. S. Harrison, acting regional superintendent of radio regulations, Vancouver; Mr. Davies; W. A. Caton, controller of radio regulations, Ottawa; and R. A. Cole, regional controller of telecom.



B. S. Harrison (right) acting regional superintendent of radio regulations, Vancouver, presents a set of matched golf clubs to Donald Mitchell on the occasion of his retirement.

Near East and later on various passenger liners plying the Atlantic.

His appointment, by request, to the Hudson's Bay Company's "Baychimo" introduced Mr. Mitchell to Canada's West Coast and, in 1927, he joined the government radio service. Throughout the years he held various positions, rising to inspector-in-charge of radio regulations in Victoria.

On April 12 many friends and co-workers, including several officers from Vancouver Region Air Services, gathered to honor Mr. Mitchell on his retirement. He was presented with a set of matched golf clubs, while Mrs. Mitchell received a bouquet of pink roses.

In Memoriam

Samuel Strang Foley, retired regional director of air services at Toronto, died on May 16. He was in his 67th year.

Born at Saint John, New Brunswick in 1899 Mr. Foley led a colorful life. He first worked in the family pottery, leaving at the age of 16 to serve in France as a motorcycle despatch rider. After the war he returned to Canada and entered the car business, first in New Brunswick and then in Hamilton, Ontario, with his brother Roy.

Sam Foley's interest in aviation came during this period when he learned to fly and instruct under Major R. Dodds, former controller of civil aviation. From 1929 to 1936 Mr. Foley was chief instructor and manager of the Hamilton Flying Club and manager of Hamilton Civic Airport.

In 1936 he joined the newly-created Department of Transport as assistant inspector of air regulations at Winnipeg. In 1940, after a tour at Ottawa, he was appointed district inspector, southern airways at Hamilton. In this position he was responsible for the selection and development of airports for the British Commonwealth Air Training Plan. For his work in this connection he was awarded the M.B.E.

In 1948 Sam Foley was appointed district controller of air services at Moncton, N.B. and three years later was made regional director of air services at Toronto.

Due to ill health Mr. Foley retired at the age of 60 in 1959. He is survived by his widow, Winnifred, daughter, Geraldine, and brother Ronald.



L. T. Campbell, left, recently appointed chief, administrative division, meteorological branch and George H. Legg, who replaces Mr. Campbell as liaison meteorologist at Ottawa.

Staff Changes In Met Branch

L. T. Campbell, formerly liaison meteorologist at Ottawa, has been appointed chief of administration for the meteorological branch. He is being replaced at headquarters by George H. Legg, superintendent, forecast office operating requirements section.

Mr. Campbell, a native of Iroquois, Ontario, graduated from Queen's University in 1941 with an honors degree in mathematics and physics. In 1942 he joined the meteorological branch and spent the next 10 years filling a variety of assignments at weather offices in Montreal, Goose and Gander. He assumed the duties of liaison meteorologist at Ottawa in 1952 and remained as such until his recent appointment to fill the position vacated by the present director of the branch, J. R. H. Noble.

In appointing a successor to Mr. Campbell it was decided to fill the position, in future, on a 2-year rotational basis. The reason for this being that the position of liaison meteorologist offers an excellent

opportunity for broadening experience and obtaining an intimate knowledge of both department and government procedures and policies. As the title of the position implies, the duties are to advise officials of Transport and other government departments on meteorological matters and, because its headquarters are outside of Ottawa, to keep the meteorological branch informed on developments in Ottawa.

George Legg, the first meteorologist to fill the position under the new plan, has been with the branch for 24 years. In 1941 he graduated from University of Western Ontario with a honors degree in mathematics and physics. During the war years he served at a number of Department of National Defence weather establishments. He obtained a master's degree in physics in 1947 and was appointed officer-in-charge at Whitehorse, N.W.T. The following year he became shift supervisor at Malton, Ontario and in 1960, assumed an administrative position at Toronto headquarters.

Cross-Canada Dateline



Edmonton—The Edmonton Airport emergency service staff ranked high in the recently announced results of the 1964 Fire Prevention Contest:

Grand Award D.O.T. Air Services: First in Class "A"
Airports: Eighth in National Fire Protection Assoc. Contest (Government Division)
Boston, Mass.

Regional Director Air Services G. E. McDowell presented framed certificates to Airport Manager Ian MacAskill and Airport Fire Chief Harvey Miller and extended congratulations from the assistant deputy minister, air, for the splendid showing they made. As well, he emphasized the practical value of a good fire prevention program.

Toronto—Early in June J. R. H. Noble, director of the meteorological branch, announced the names of 22 co-operative weather observers who were presented with an award for excellent weather reporting over a number of years.

There are more than 2,200 weather reporting stations in Canada. At stations other than those staffed by D.O.T. employees. Observations are taken by co-operative observers who perform their duties in the public interest.

This year's awards, desk barometers, are the 11th of a series of annual awards. Recipients were as follows:

Observer	Station
A. Dickinson.....	Alouette Lake, B.C.
J. Blake	Coquitlam Lake, B.C.
Mrs. Ruth Mason.....	Hope Kawkawa Lake, B.C.
David N. Way.....	Sardis, B.C.
Norris E. Hyde.....	Sicamous, B.C.
Red Deer Fire Dept.....	Red Deer, Alta.
Mrs. Steve Zinkewich.....	Vilna, Alta.
Stanley Barholz.....	Brownfield, Alta.
G. R. Portsmouth.....	Kitscoty, Alta.
J. B. Larre.....	Butte St. Pierre, Sask.
Ewalt Schwanke.....	Kuroki, Sask.
K. E. Robertson.....	Denzil, Sask.
Victor Shebeski.....	Arborg, Man.
Edward G. Hoehn.....	Grass River, Man.
G. W. Jackson.....	South Bay Mouth, Ont.
Mrs. Walker Drummond.....	Millgrove, Ont.
R. C. Robinson.....	Durham, Ont.

R. H. Dean.....	Toronto Highland Creek, Ont.
Armand Savoie.....	St. Charles de Caplan, Que.
Rev. Sister Marie Emmanuel.....	St. Romuald, Que.
Rev. Philippe Mailhot, S.C.....	Victoriaville, Que.
Charles T. Doherty.....	Pleasant Bay, N.S.

Scott Air Force Base, Illinois—Weather matters of national concern to Canada and the United States were the topic of conversation for these weather scientists. At USAF Air Weather Service headquarters for briefings, Dr. Donald P. McIntyre (center), chief of research and training, D.O.T. meteorological branch, met with Brig. Gen. Ray W. Nelson, Jr., air weather service commander (right), and Dr. Robert D. Fletcher, air weather service director of aerospace sciences. (A copy of the January/February issue of News On The DOT is seen on the table.)



Halifax—The department's new Mark 8 foam crash truck was seen in action at Halifax International Airport during a three-week aircraft crash firefighting course. Headquarters training officer D. E. Curtis and R. A. Hanley, Moncton regional fire prevention officer, conducted the course.

The foam crash truck is one of six such vehicles now in service at D.O.T. airports at Halifax, Montreal, Toronto and Edmonton. By the end of the year two others will be in service at Vancouver and another at Edmonton. Weighing more than 40,000 pounds each, the trucks can discharge 5,000 gallons of foam per minute to quench a fire.



Open New Fredericton Air Terminal

Hon. H. J. Robichaud, Minister of Fisheries, pulled the switch of an impressive-looking "generator", set motors humming and lights a-flashing at the Department of Transport's new air terminal at Fredericton, N.B., as he declared the building officially open on May 14.

Mr. Robichaud was introduced by Hon. J. W. Pickersgill, who presided as chairman of the gathering. The platform guests included Hon. J. Leonard O'Brien, Lieutenant-Governor of New Brunswick; Hon. L. J. Robichaud, Premier; Fredericton Mayor W. T. Walker; County Warden J. E. Gandy; Hon. Hugh John Flemming; Brigadier E. C. Brown, chairman of the board of commissioners, Town of Oromocto; J. Chester MacRae, M.P.; H. Noel, airport manager; and D. C. Tennant, assistant vice-president of operations, Air Canada.

A capacity audience of invited guests heard brief addresses by the Fisheries Minister, Mayor Walker and the Premier. Mr. Robichaud reviewed some of the achievements of the Department of Transport in the realm of aviation in the Maritime Provinces and voiced his appreciation of the excellent facilities provided at the new Fredericton terminal.

Hydro power was the theme of the ceremony, emphasizing Fredericton's proximity to the Mactaquac power project. Mr. Pickersgill drew much laughter when, in his final remarks, he referred to the "dangerous-looking machine" near the stand and asked Hon. Mr. Robichaud to pull the switch and set it in motion. The "generator" was produced by the airport staff, along with a large illuminated "Fredericton" sign which left no doubt as to the city that was the scene of the day's special event.



(Top): Copper sculpture by Fredericton Artist Claude Roussel adds an effective "Air Age" touch to the terminal. (Bottom): The main waiting room combines modern design and comfort for the travelling public.



It's "Home" to Vancouver Air Services Personnel

by Dr. T. G. Howe, *Regional Director,
Vancouver Air Services*

The 53-year-old Winch Building, situated in the heart of downtown Vancouver a block from the intersection of Granville and Hastings Streets, overlooks Vancouver Harbour, Stanley Park and the Lions Gate Bridge.

A 15-year history of a building is usually of little consequence, but those past number of years in the life of the Winch Building tell the story of the exciting development of Vancouver Region Air Services.

The department's post-war plans culminated in 1948 in the decision of the late Air Vice Marshal Tom Cowley, then director of air services, to decentralize the organization into six regional air services units. This was the first step in a gradual trend which has gained momentum with the publication of the Glassco Report and the present implementation of the Urwick-Currie Report.

In 1950 70 air services employees moved from numerous locations around the city into the upper three floors of the Winch Building and from then on the steady growth of staff reflects the increasing public services being provided to aviation. By 1955 there were 110 employees busy in the building, by 1960 213 and today, in 1965, 250. Despite various criticism concerning its "rabbit warrens", dark and unventilated offices, Edwardian elevators and old-style architecture, the Winch Building has proved to be a successful centre for the West Coast's air services organization. Only once was its reputation questioned: a letter received was addressed to the "Wench Building".

One of the building's conveniences is that it is located adjacent to the air services stores depot and the large regional garage and vehicle pool. Consolidation of these vital services with the

administrative function has been particularly helpful. The regional organization is a completely packaged unit.

Although the first invasion of 70 personnel took over the top three floors, all surplus accommodation has long ago been used up and the D.O.T. organization has overflowed into the lower floors. This year the entire building, five floors and basement, will be taken over by air services.

On the ground floor will be the three sections providing the most service to the public—air regulations, radio regulations and the purchasing section. Construction branch will be housed completely on the second floor, civil aviation on the third, the regional director and administrative and personnel services on the fourth, and telecommunications and electronics on the fifth. Workshops and storage compartments will occupy the basement.

Of the original 70 employees who moved into the building in 1950, 23 are still with the department. In the construction branch only Eric May, Roy Berlet and Jack Douglas are left, although Tommy Tait is still around in civil aviation. Bill Lavery, Len Milne, Joe Bertalino and Miss Dawn Brewer still attend to air regulatory matters. Miss Gertrude Fox remains in the meteorological branch. Miss Vera Elliott, Mrs. A. J. Kennett, Mrs. N. M. McLeod, Miss Dorsi Doidge, Ken Joynes and Andy Boyd carry out administrative and personnel work. Hal Wilson, Tom Dennis, Jack Batts, Harry Trice and Neil McLeod continue to serve civil aviation. Phil Eldridge, Jack Chalmers and "Mort" Mortensen assist in administering telecommunications.

With no Public Works master plan evident for new space for the many federal offices in the city, the Winch Building will serve the Vancouver regional air services for at least another five years. Until then, at least, visitors to the office will still have to make it their first duty to explore the devious route to and from the cafeteria for a cup of coffee and bring with them package of breadcrumbs to blaze a Hansel and Gretel trail to the garage or stores depot. They are quite short distances, but only to the experienced navigator.

HAVE YOU A SUGGESTION?

Clip this form and send it to the Secretary, Suggestion Award Plan, Department of Transport, Ottawa. Any suggestions you have might prove beneficial to the department.

OPPORTUNITIES UNLIMITED

THINK . . .
SUGGEST

Describe your suggestion clearly and concisely.
Indicate where and how it can be used and the benefits expected.
Use sketches, samples or anything you want to make your idea clear.
If it is difficult to write, your supervisor will gladly help.
When a suggestion is not used, reasons will be given in writing.

SEND POSTAGE FREE TO: SECRETARY, SUGGESTION AWARD COMMITTEE, OF YOUR DEPARTMENT

(SEE REVERSE SIDE)

I would like to suggest

Suggestion No. _____
(For official use)

If possible, indicate your estimate of savings.

If required, use other side

SUGGESTION AWARD PLAN OF THE PUBLIC SERVICE OF CANADA

PLEASE COMPLETE USING BLOCK LETTERS

SUGGESTION NO.
(FOR OFFICIAL USE)

MR. MRS. MISS	FAMILY NAME	(FIRST NAME & INITIALS)	CLASSIFICATION OR RANK
DEPARTMENT	BRANCH	LOCATION	
HOME ADDRESS			
IF YOU WISH TO REMAIN ANONYMOUS, CHECK HERE <input type="checkbox"/>			
DATE		SIGNATURE OF SUGGESTOR	

World's First Icebreaking
Cable Repair Ship
Christened

The world's first icebreaking cable repair ship, built at the yard of Canadian Vickers Limited of Montreal, was christened the CCGS "John Cabot" on May 31. Mrs. Douglas F. Bowie, wife of the president and general manager of the Canadian Overseas Telecommunication Corporation sponsored the new Coast Guard vessel, at a ceremony attended by Deputy Minister John Baldwin, Assistant Deputy Minister, Marine G. W. Stead, Director of Shipbuilding J. R. Strang and other senior departmental officers.

Costing some \$8,000,000, the "John Cabot" is 313 feet long, 60 feet wide, and is a twin-screw, diesel-electric powered vessel with a capacity of 400 miles of submarine cable in her three big storage tanks.

The ship measures 5,000 gross tons and will lay and repair cable for the Canadian Overseas Telecommunication Corporation in the Gulf of St. Lawrence, along the Atlantic seaboard and in the Eastern Arctic. It will lay cable over the bow only and is equipped with both bow and stern water jet reaction systems to help in manoeuvring at slow speeds while engaged in grappling, replacing or repairing cable. It has a Flume stabilizing system to reduce rolling in heavy seas, and a heeling tank



system for use in freeing the vessel when caught in heavy ice.

The ship has a helicopter deck with telescopic hangar, the latter a design evolved by D.O.T. for shipboard helicopter operations.

Propulsion machinery consists of four propulsion generators, each developing 3,000 brake horsepower, driving two propulsion motors, each of 4,500 shaft horse-

power, operated from a common control room and remotely controlled from the wheelhouse and bridge, and from the fore-castle head. The cable handling machinery also will be remotely controlled in this fashion.

The ship's complement will be about 85 men, including ship's officers and crew, helicopter pilot and engineer and cable engineers.

How To Make Money – By Trying!

Everyone is interested in making money, but despite all the "come on's" of modern-day advertising, it's next to impossible to do so without even trying. One of the ways open to all civil servants earning up to \$7,500 per annum, is through the suggestion award plan.

It isn't guaranteed, of course. Like everything else, you must work at it. But the right idea, explained in the right way, can earn extra dollars or merchandise awards for you. Some recent winners include:

NAME	POSITION	LOCATION	AMOUNT
D. H. Baylis	technician, electronics	Victoria	\$25
Joseph Kovalenki	air traffic controller	Edmonton	\$30
Mrs. Adrienne Larkin	clerk	Ottawa	\$15
William M. Park	technician, electronics	Windsor	\$30
			\$10
T. Reilly	technician, electronics	Toronto	\$20
Mrs. Anne Schurman	clerk	Moncton	\$40
J. D. G. Soucy	met. technician	Quebec	\$10
G. E. Taylor	radio operator	Fort William	\$10

Canadian Coast Guard ALBUM



CCGS "Verendrye", completed in October, 1959, at the yard of George T. Davie and Sons Ltd., Lauzon, Que., operates in the Sorel, Que., District Marine Agency as a lighthouse supply and buoy vessel. She is seen here arriving at Ottawa at the end of her 1965 Spring buoy-laying task on the Ottawa River.

CCGS VERENDRYE

LENGTH: 125 feet

BREADTH: 26 feet

DRAFT: 7 feet

POWER: Twin screw Diesel, 760 shaft horsepower
continuous

GROSS TONNAGE: 297

the
dote

september/october 1965

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Canada

What income can
you expect at
Retirement?
Blockhouse
becomes Museum



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COVER

Stone blockhouse built at Merrickville in the 1820's. See story "Merrickville Blockhouse Becomes Museum" on page 12.

EDITOR

Yvonne McWilliam

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Am I My Brother's Keeper?

Canada today is a fortunate land. Times are generally good. Wages are high. Yet in every community there are children, men and women who are in serious trouble.

A crippled child needs long-term therapy and costly equipment to overcome his handicap.

A widowed mother needs special help while her children are too young to allow her to get a job.

A man stricken with mental disease in the prime of life needs advice and rehabilitation when he leaves the hospital.

All these needs—and countless others—can be met with the dollars you contribute to your United Appeal. If you don't contribute enough to meet the targets, some of these pressing human needs will go unserved.

For sick veterans and unmarried mothers, for orphaned children and victims of multiple sclerosis, for these and many unfortunate members of our fortunate society, your dollars are needed.

Canada's United-way campaigns now cover 120 communities. In 1965 they aim to raise some \$40,000,000 for 2,000 organizations. On the average, each community appeal spends four per cent of its income on its campaign and three and a half per cent on year-round administration, so that each dollar you contribute means 92.5 cents for the relief of suffering or the building of character.

In the last generation we have gone much farther than ever before to meet welfare costs through taxes. The government now makes sure that no one starves to death or wastes away for want of hospital care. Governments provide a basic welfare "floor", but they cannot look after all the welfare needs of our society; to do so would require a huge increase in taxes.

Voluntary contributions are needed to fill the gap. For many people steadily employed, donations by payroll deduction are available. The federal government now allows its employees to contribute via payroll deduction, thus recognizing the importance of the voluntary programs.

Soon, a United Appeal canvasser will call on you. Give—or pledge—as much as you can afford. If we fail to meet our target, we will fail those who are less fortunate than ourselves.

For the answer is: yes, we are our brother's keeper.



FROM THE DEPUTY MINISTER'S DESK

From time to time we receive complaints about the decisions or actions of departmental officials. Each is carefully investigated and the great majority prove to be erroneous or exaggerated. Where necessary, corrective action in the matter of policy or individual action is taken.

Human nature being what it is, we receive fewer messages of congratulations or thanks, but recently I have been complimented for the courtesy and special efforts of a number of our field officials—a lock-master on the Rideau Canal, a radio inspector on the Prairies, a civil aviation inspector in the Maritimes and a marine official in British Columbia.

These messages gave me great pleasure and give me the opportunity to tell you the philosophy which, at senior management level in the department we have often discussed, is a basis for dealing with the public, whether personally or in writing.

We must be guided by governmental and departmental policy which appears in various rules, regulations or directives but when we deal with a request, the approach should always be the positive one of hoping that it will be possible to say "yes" and trying to assist the individual making the request. If we have to say "no", we should take the trouble to explain and to give adequate reasons as to why this is the case; and, if we can, we should offer helpful advice as to possible alternative approaches to the problem. Finally, in all cases we should always try to provide a little extra in the way of service over and above that which might normally be expected. If we start from the point of view that we want to help we will leave that impression even if our ability to help is limited.

We have been successful in Transport in avoiding the erroneous, but nevertheless traditional and sometimes widespread, impression that the civil servant lives by a book of rules, is not flexible and likes to take a negative approach. Our job is to help the public and whenever we are successful in creating this belief in a member of the public we, in turn, help to build the effective reputation of the department.

J. R. Baldwin



LE MOT DU SOUS-MINISTRE

Nous recevons de temps à autre des plaintes concernant les décisions ou les mesures prises par certains fonctionnaires du Ministère. Chaque plainte fait l'objet d'une enquête approfondie et il ressort qu'elle est erronée ou exagérée dans la plupart des cas. Au besoin, des mesures sont prises pour y remédier, qu'il s'agisse d'une question de ligne de conduite ou d'un cas particulier.

La nature humaine étant ce qu'elle est, les félicitations ou les remerciements ne pleuvent pas sur nous. Toutefois, j'ai reçu dernièrement des félicitations pour la courtoisie et le désintéressement qu'avaient manifestés un certain nombre de nos fonctionnaires de l'extérieur, notamment un maître-éclusier du canal du Rideau, un inspecteur de la radio des Prairies, un inspecteur de l'aviation civile des Maritimes et un fonctionnaire des Services de la marine en Colombie-Britannique.

Ces témoignages m'ont fait chaud au cœur et je profite de l'occasion pour vous exposer les principes sur lesquels nous nous basons dans nos relations épistolaires ou personnelles avec le public, principes qui ont été longuement étudiés à l'échelon de la direction du Ministère.

Notre tâche consiste à appliquer la ligne de conduite du gouvernement ou du Ministère exposée dans diverses règles, règlements ou directives. Toutefois, quand nous répondons à une demande, nous devons toujours espérer qu'il nous sera possible d'y répondre par l'affirmative et tenter d'aider la personne qui la présente. S'il nous faut y répondre par la négative, nous devrions fournir les explications qui s'imposent et donner les raisons qui motivent notre décision; nous devrions également, dans la mesure du possible, signaler les autres solutions qui pourraient être apportées au problème. Enfin, dans toutes les circonstances, nous devrions toujours tenter de dépasser tant soit peu la mesure du service que nous sommes censés rendre. Si notre attitude est d'abord dictée par notre volonté de rendre service, nous donnerons cette impression aux gens même si nous ne pouvons les aider que dans une mesure restreinte.

Au ministère des Transports, nous avons réussi à ne pas laisser aux gens l'impression erronée, mais néanmoins traditionnelle et parfois répandue, que le fonctionnaire est lié par les règlements, qu'il manque de souplesse et qu'il aime à prendre une attitude négative. Notre tâche consiste à rendre service au public et chaque fois que nous réussissons à laisser cette impression à quelqu'un, nous contribuons au bon renom du Ministère.

J. R. Baldwin



View of Cape Race installations seen from lighthouse. Radio beacon, located $\frac{1}{2}$ mile to left, not shown.

Farewell to Cape Race Marine Radio

Cape Race Marine Radio station goes off the air this fall. After 61 years of continuous operation it has been made obsolete by modern equipment at St. John's and St. Lawrence.

Tucked away at the southeast tip of Newfoundland, Cape Race juts out into the Atlantic steamer routes and presides over vast stretches of ocean on three sides. In the early days of magnetic and crystal detector receivers, most westbound vessels plying the Atlantic came within range of Cape Race station and its call letters VCE.

Geography, though, had to give way to technology and as telecommunications methods improved Cape Race lost much of its built-in advantage as a radio station site.

But the intervening years were crammed with marine history—epitomized by the sinking of the Titanic. News of that 1912 tragedy first reached the world via Cape Race.

The first distinctive, wavering note from Cape Race was sent in 1904 by the Marconi Company, which built and operated the station. Within five years it had been levelled by fire. Rebuilt, it was again razed in 1913.

A need for a direction-finding station prompted the Canadian government to build one less than a mile to the west in 1918. At the beginning VCE handled the work because the new station had no transmitters. But soon station VAZ was on the air.

Increasing use of ship radio following World War 1 meant VCE was a very busy station. Not too many years passed, however, before Cape Race began to feel the progress in radio development. Larger ships were being fitted with long wave radio telegraph apparatus allowing direct mid-Atlantic to Europe or America communication.

In 1930 the Marconi station closed down. The government station (VAZ) took on the job of coastal station as well as direction finding. The latter service had already gained some distinction by guiding the R 34 and other Trans-Atlantic flights. By 1931 it was apparent that the old Marconi buildings and masts offered better facilities. VCE and the government station moved back to its old home where it has remained ever since.

Cape Race has many memories, but none to match April 14, 1912. W. J. Gray, officer-in-charge, after a busy day, was chatting with a personal friend aboard the White Star line's newest ship, the Titanic. His friend, Mr. Phillips, the ship's chief radio officer, transmitted the gay spirit of the maiden voyage of the world's biggest ship into his key. After a brief chat, Gray closed down his set. He went to check his equipment before going to bed. Shortly after his assistant Herbert Harvey came running.

The Titanic was calling "CQD, CQD".

(This was the international distress signal before the adoption of the clearer and easier SOS.)

Gray raced back to his set and called the Titanic—a proud ship crippled by an iceberg and even then dipping deep into the chilling Atlantic. Phillips replied: "We are now sinking by the head—putting women and children off in boats—weather clear and calm."

Signals were good for the next two hours. Phillips, true to the traditions of the "brass pounders", remained at his key to send the messages needed to direct the rescue ships. Every tilt of the ship was felt in his radio cabin, but he never stopped. Signals started to fade. There was one very weak CQD. Then they stopped.

Ashore, Mr. Gray did all he could. He picked up the Titanic's calls and relayed them to ships he knew were closest. His friend Phillips was facing death, but Gray noticed his hand never skipped on the key.

History records that the Carpathia got there in time to pick up many of those in the boats and those floating in the water. But still 1,502 perished.

Gray's work wasn't done. From the Carpathia he got a list of the names and addresses of survivors. These he flashed to shocked relatives and a stunned world. Four days after the first distress call was heard the last name was sent—and for the first time in 96 hours the officer-in-charge of the Cape Race marine radio station laid down his earphones and went to bed.



What income can you expect at retirement?

—The effect of the Canada Pension Plan on the Public Service Superannuation Act.

W. J. (Wilf) Trudeau, director of the federal government's superannuation branch, has had to offer soothing counsel to some pension-minded civil servants recently—in fact, ever since the announcement that the Canada Pension plan would be a reality on January 1, 1966.

"If my telephone at Ottawa is any barometer at least some public servants are quite exercised over the matter", he has said.

"The matter" is the integration of the proposed Canada Pension Plan (referred to in this article as the CPP) and the Public Service Superannuation Act (PSSA).

"Indeed some public servants have even asked whether they should resign now and thus avoid the supposed catastrophe that is about to descend on them", he told the DVA Employees' National Association convention in Calgary last May.

Integration, Mr. Trudeau made plain to the convention, does not call for that kind of cure . . . under the proposed formula public servants will pay about the same as they do now and receive as much as and perhaps more than they could have expected if they had retired with an immediate annuity under the PSSA before it was amended.

How will this come about? Well, in part, from two broad objectives recommended by the advisory committee on the PSSA, which includes staff association representatives, and agreed to by the government:

1. the overall level of contribution rates under the two plans should remain the same as it is now under the superannuation act.
2. the combined benefit package under the two plans should not be lower than it is now for the person who retires with an immediate annuity under the superannuation act.

The aims, however, are one thing, the arithmetic another, and Mr. Trudeau admits there are still "a few loose ends which have not yet been resolved."

The need to integrate stems from two main sources: contribution rates for the PSSA are fairly high in relation to other plans (6½ percent for men and 5 per cent for women) and it was felt most public servants would not like the idea of paying an additional 1.8 per cent of their salary to the Canada Pension Plan.

Secondly, PSSA benefits are among the best in the country and if CPP benefits were added on along with old age security payments of \$75 a month then "we would be approaching what some might regard as too much of a good thing" according to Mr. Trudeau.

Essentials of the Public Service Superannuation Act

Basically what the PSSA provides for is joint contributions from the government and its employees. A man's $6\frac{1}{2}$ per cent of salary and a woman's 5 per cent are matched by the government. As well, the government pays interest at 1 per cent per quarter on the balance in the account and periodically kicks in other amounts to offset actuarial deficits due to salary increases or other reasons. In the long run the government pays for something like two-thirds of the total cost of its superannuation scheme.

For these contributions PSSA guarantees certain benefits. Fewer than five years of service entitles an employee to a return of contributions only; between five years service and age 60, a return of contributions or a deferred annuity payable at age 60; after 60 (with five years of pensionable service) an employee is entitled to an annual annuity of 2 per cent per service year up to 35 years, multiplied by his average salary for his best six consecutive years.

Essentials of the Canada Pension Plan

Under the Canada Pension Plan virtually every Canadian wage earner, 18 years of age or over, will contribute 1.8 per cent of earnings and his employer will match it. The first \$600 of earnings will be exempt and the salary ceiling will be \$5000. Maximum contributions will be \$79.20 a year; that is, 1.8 per cent of \$4,400. As Canada progresses the exemption and ceiling figures will rise in line with the cost of living index and increases in the general wage level. When the time comes to calculate your annuity under the CPP your earnings will be adjusted to take into account increases in the earnings' ceilings. In other words if you earned \$4,000 one year when the ceiling on earnings for pension purposes was \$5,000 it would be adjusted to \$4,800 on retirement if the ceiling then was \$6,000, because \$4,800 bears the same relationship to \$6,000 as \$4,000 does to \$5,000. Consequently the purchasing power of a CPP annuity will be kept in line with the average wage level at retirement.

In return for these contributions the CPP will provide an annuity beginning at 65, if the person is then retired, equal to 25 per cent of his average annual earnings throughout his career.

Contributions will begin on January 1, 1966. The first benefits will be payable in 1967 to contributors who are then 68, and in the next year to those 67 and so on until 1970 when those age 65 will be eligible. A full pension will be payable at age 70 even though a person may still be working. However, if a person goes on pension at 65 and then returns to work at any time before age 70, his CPP annuity will be reduced if his earnings are more than

\$900. Benefits from other pension plans, like superannuation, however, are not classed as earnings and will not reduce CPP benefits.

The Canada Pension Plan has a transition clause. After 10 years of contributions a full benefit will be paid. The plan also provides for survivor benefits to widows and dependent children and annuities before 65 for a disabled contributor. The maximum death benefit under the CPP will be \$500 initially. These will first be paid in 1968 and from then on.

In skeleton form the foregoing is the CPP although there are many refinements: those retiring before completing 10 years of contributions, that is, before 1976, will receive pro rated benefits—e.g. in 1975 they would receive nine tenths of a full benefit, in 1972, six tenths, and so on; a drop-out feature permitting, under certain conditions, deduction of 15 per cent of the months in anyone's working career when earnings were low or he was unemployed; and others.

Integration of Two Plans

The effect of integration of the Canada Pension Plan and the Public Service Superannuation Act will be felt on benefits under the PSSA only after January 1, 1967. Superannuation equity built up before January 1, 1966—the day CPP contributions begin—will not be affected. When the plans are dovetailed the PSSA will be supplementary to the CPP, rather than complementary.

Subject to the following qualifications the main change will be that the 2 per cent per year of pensionable service formula used to compute superannuation benefits will be reduced to 1.3 per cent per year for every year in which a civil servant has contributed to the Canada Pension Plan and provided CPP benefits are then payable. This 1.3 per cent will apply to the average salary computed in the superannuation way (best six years) provided that salary is below the maximum CPP earnings ceiling at retirement. If the "best six" formula yields an average salary greater than the CPP maximum, the 1.3 per cent rate will apply only up to that maximum. Any amount over and above that maximum will be computed on the old 2 per cent formula.

Sound confusing? Perhaps the three typical cases cited by Mr. Trudeau in his Calgary speech will help clarify the various formulas mentioned.

The first is a young person who enters the public service in 1966 after the Canada Pension Plan has come into effect, the second is a public servant who has been in the public service for 20 years prior to 1966 and intends to work for another 15 years and the third is a public servant who has completed 35 years under the Public Service Superannuation Act before 1966 and intends to work for another 10 years. Ideally it would be well to study the circumstances of each public servant and advise him accordingly but since this is impossible these three examples may enable you to grasp the main features of integration.

In the case of the young man who enters the public service in 1966 we shall assume that his earnings throughout his career remain below the maximum pensionable earnings under the

Canada Pension Plan. He will immediately start to contribute at the rate of 1.8 per cent on that part of his salary which is in excess of \$600 to the Canada Pension Plan and at the rate of 4.7 per cent on the same amount to the Public Service Superannuation Account (a total of 6.5 per cent) and at the end of his career will receive a benefit equal to 25 per cent of his adjusted average career earnings from the Canada Pension Plan and a benefit of 1.3 per cent for each year of pensionable service up to a maximum of 35 years under the Public Service Superannuation Act. His pension under the Public Service Superannuation Act, unlike his benefit under the Canada Pension Plan which is based on his adjusted average earnings throughout his career, will continue, of course, to be based on his best six year average salary. It is possible that these two benefits combined may be approximately equal in value to the seventy per cent benefit he would have received if he had remained under the Public Service Superannuation Act alone. We regret that we cannot be more exact than that but with the many changes which are inevitable in the Canada Pension Plan and the Public Service Superannuation Act over the next 30 or 40 years it is impossible to be more precise.

Our second example was the man who now has 20 years in the public service and expects to work for another 15 years and just to complicate things a little we shall assume that his average salary at retirement is in excess of the maximum pensionable earnings under the Canada Pension Plan. When he retires he will get a full 2 per cent benefit under the Public Service Superannuation Act for each of the 20 years prior to 1966 and a 1.3 per cent benefit under the Public Service Superannuation Act for each of the following 15 years on that part of his average salary which is below the Canada Pension Plan maximum. For that part of his average salary which is in excess of the Canada Pension Plan maximum he will get a full 2 per cent benefit under the Public Service Superannuation Act. To summarize then he will get a full 2 per cent benefit for the 20 years before the Canada Pension Plan, a 1.3 per cent benefit for each of the following 15 years on that part of his eventual average salary which is below the Canada Pension Plan maximum and a 2 per cent benefit for each of the 15 years on that part of his average salary which is in excess of the Canada Pension Plan maximum. As mentioned previously, he will also get a full benefit under the Canada Pension Plan since it matures in 10 years. The combined value of these benefits will be somewhat in excess of the 70 per cent benefit which he would have received under the Public Service Superannuation Act alone.

The third person was the man who now has 35 years under the Public Service Superannuation Act and expects to contribute to the Canada Pension Plan for the next 10 years. He will get a full 2 per cent benefit for each of his 35 years under the Public Service Superannuation Act and of course will no longer contribute under that Act since the maximum contributory period is 35 years. He will, however, contribute 1.8 per cent of his salary between the contributory limits to the Canada Pension Plan for the next 10 years and at the end of that time, if he retires at the age of 65, will receive a full Canada Pension Plan benefit as well. In other words he will get a full pension under both the Public Service Superannuation Act and the Canada Pension Plan.

To further explain the integration formula we might take another look at our second example, namely a man who has been in the public service for 20 years, intends to work for another 15 years and whose salary is in excess of the Canada Pension Plan maximum. We shall assume that he is 50 years of age and his salary on January 1, 1966 is \$8,000 and we shall also assume that both his salary and the Canada Pension Plan maximum of

\$5,000 will remain constant for the next 15 years. (Obviously neither of the last two assumptions is sound but they are necessary to illustrate the application of the arithmetic in the integration formula.)

On January 1, 1966 this man will start to contribute 1.8 per cent of his earnings between \$600 and \$5,000 to the Canada Pension Plan and 4.7 per cent of the same amount to the Public Service Superannuation Account. On the same date he will continue to contribute 6½ per cent to the Public Service Superannuation Account on that part of his income which is in excess of \$5,000, that is \$3,000, and will, of course, contribute nothing to the Canada Pension Plan on that amount. Incidentally, it is also proposed that this man, and the others, will also contribute 6½ per cent on that part of his salary below \$600, the Canada Pension Plan minimum.

When he retires 15 years from now he will be eligible, under the Public Service Superannuation Act, for a full 2 per cent pension for each of his 20 years prior to 1966, a 1.3 per cent pension for each of the next 15 years on that part of his earnings below \$5,000 and a full 2 per cent pension for each of the same 15 years on that part of his income in excess of \$5,000. Since we assumed that his salary will remain constant at \$8,000 his average salary for his best six years would be \$8,000 and therefore at the end of his career he would receive a pension under the Public Service Superannuation Act on the basis of 20 years times 2 per cent times \$8,000 which is \$3,200, plus 15 years times 1.3 per cent times \$5,000 which is \$975, plus 15 years times 2 per cent times \$3,000 which is \$900, for a grand total of \$5075. In addition he will receive a pension of \$1250 under the Canada Pension Plan since he contributed for over 10 years on the maximum amount of \$5,000 throughout. Therefore at retirement he will receive under the two plans a combined total of \$6,325. Had he retired with a 70 per cent benefit under the present provisions of the Public Service Superannuation Act he would have received \$5,600. Therefore for the same contributions he will receive \$725 a year more than he would have otherwise. This serves to bear out our earlier statement that many public servants will be in a somewhat better position after integration.

Thus far we have not mentioned the benefits which will be payable to widows and children under the Public Service Superannuation Act after integration has taken place. In this regard, you will be pleased to learn that the integration formula does not affect them and they will get exactly what they would have received under the Public Service Superannuation Act if it had not been amended and they will also of course be eligible for the benefits which are payable to widows and children under the Canada Pension Plan. It follows therefore that most widows and children will be in a better position than ever.

No doubt, many questions still remain unanswered, but in an article of this kind it is impossible to deal with every eventuality. It should, perhaps, be made clear that these two plans are administered by separate bodies: the Superannuation Branch of the Office of the Comptroller of the Treasury handles the PSSA, while the Canada Pension Plan is primarily the responsibility of the Department of National Health and Welfare. Queries concerning one or the other of these plans should be directed to the proper department.

In conclusion it should be pointed out that old age security pensions of \$75 a month are in no way affected by integration of these plans, but they should be kept in mind when calculating the income you can expect at retirement.

Quel sera votre revenu lorsque vous prendrez votre retraite?



Les effets du Régime de pensions du Canada sur la Loi sur la pension du service public.

M. W. J. (Wilfrid) Trudeau, Directeur du service des pensions de retraite du gouvernement fédéral, a dû dernièrement calmer les appréhensions de certains fonctionnaires qui se préoccupent de leur pension de retraite, surtout depuis qu'on a annoncé que le Régime de pensions du Canada entrerait en vigueur le 1^{er} janvier 1966.

«S'il faut en croire le témoignage de mon téléphone à Ottawa, il y a au moins quelques fonctionnaires qui se préoccupent fortement de la question», a-t-il déclaré.

La question en cause est l'intégration du Régime de pensions du Canada (appelé RPC pour les fins du présent article) et la Loi sur la pension du service public (LPSP).

«Il y a même certains fonctionnaires qui m'ont demandé sérieusement s'il ne vaudrait pas mieux pour eux de prendre leur retraite dès maintenant et éviter la prétendue catastrophe qui doit s'abattre sur eux», a déclaré M. Trudeau au congrès de l'Association nationale des employés du ministère des Affaires des anciens combattants tenu à Calgary en mai dernier.

M. Trudeau a déclaré clairement aux congressistes que l'intégration n'appelle pas un tel remède . . . en vertu de la formule proposée, les fonctionnaires verseront à peu près les mêmes cotisations qu'ils versent maintenant et bénéficieront des mêmes prestations et peut-être de prestations plus avantageuses que celles dont ils auraient bénéficié s'ils avaient pris leur retraite en jouissant d'une pension immédiate en vertu de la LPSP avant qu'elle ne soit modifiée.

Comment arrivera-t-on à ce résultat? En se fondant en partie sur les deux grands principes proposés par le Comité consultatif de la LPSP, composé de représentants des associations de personnel, et acceptés par le gouvernement:

1. Le niveau global des taux de cotisation des deux régimes doit demeurer le même qu'il est présentement sous l'empire de la LPSP.

2. L'ensemble des prestations combinées des deux régimes ne doit pas être inférieur à ce qu'elles sont actuellement pour la personne qui prend sa retraite avec une rente immédiate prévue par la LPSP.

Bien qu'il soit facile d'indiquer les buts à atteindre, il est plus difficile d'effectuer les divers calculs en cause, et M. Trudeau convient qu'il reste encore quelques détails à régler.

Deux grandes raisons motivent la nécessité d'intégrer les régimes: les taux actuels des cotisations sous l'empire de la LPSP sont déjà élevés par rapport à d'autres plans (6½ p. 100 pour les hommes et 5 p. 100 pour les femmes) et on prévoyait que la plupart des fonctionnaires ne verraient pas d'un bon oeil d'avoir à payer, par surcroît, une cotisation supplémentaire de 1.8 p. 100, qui est le taux du RPC. Deuxièmement, les prestations versées aux termes de la LPSP sont parmi les plus généreuses au pays et

si on y ajoutait les prestations du RPC ainsi que celles qui sont versées en vertu de la Loi sur la sécurité de la vieillesse, à savoir \$75 par mois, «on approcherait, au dire de certains, peut-être, un surcroît de générosité», selon M. Trudeau.

Données essentielles de la Loi sur la pension du service public

Essentiellement, la LPSP a établi un régime où contribuent l'État et ses fonctionnaires. L'État égale la contribution de 6½ p. 100 du salaire du fonctionnaire masculin et celle de 5 p. 100 du salaire du fonctionnaire féminin. L'État paye également l'intérêt, au taux de 1 p. 100 par trimestre, sur le solde de la Caisse de pension du service public et y verse de temps à autre les sommes supplémentaires requises pour combler les déficits actuariels résultant de causes diverses dont, notamment, les augmentations des salaires. Bref, il est juste de dire que le gouvernement, à longue échéance, assume environ les deux tiers du coût global du régime.

Par suite de ces contributions, la LPSP garantit certains avantages. Les employés à court terme, ayant moins de cinq ans de service, ont droit au seul retour de leur contribution; ceux qui partent avant l'âge de soixante ans et qui ont cinq ans de service ou davantage, ont le choix du retour de leur contribution ou d'une rente différée qui leur sera versée à l'âge de soixante ans; ceux qui prennent leur retraite après soixante ans (qui ont cinq ans de service ouvrant droit à pension) ont droit à une rente annuelle calculée à raison de 2 p. 100 pour chaque année de service jusqu'à concurrence de trente-cinq ans, multipliée par le traitement moyen de l'employé au cours de ses six meilleures années consécutives.

Données essentielles du Régime de pensions du Canada

Aux termes du RPC, presque tous les employés canadiens de 18 ans ou plus contribueront 1.8 p. 100 de leurs gains, proportion qui sera égalée par l'employeur. Les gains d'au plus \$600 seront exemptés et le plafond des traitements sera fixé à \$5,000. La cotisation annuelle maximum sera de \$79.20, c'est-à-dire 1.8 p. 100 de \$4,400. A mesure que progressera l'économie du Canada, l'exemption et le plafond augmenteront en raison de l'indice du coût de la vie et des augmentations du niveau général de la rémunération. Par conséquent, lorsque le moment sera venu de calculer votre pension d'après le Régime de pensions du Canada, vos gains inscrits seront revalorisés pour faire la part des relèvements dans le plafond des gains. En d'autres termes, un traitement de \$4,000 que vous auriez gagné quand le plafond était à \$5,000 sera redressé à \$4,800 si le plafond au moment de la retraite s'est élevé jusqu'à \$6,000, puisque \$4,800 a le même rapport avec \$6,000 que la somme de \$4,000 a avec \$5,000. Ainsi, le pouvoir d'achat de la pension d'une personne sera maintenu en rapport avec le niveau des salaires moyens au moment de la retraite.

En retour de ces cotisations, le RPC prévoit une rente, commençant à l'âge de 65 ans, si la personne est alors à sa retraite, qui égalera 25 p. 100 de ses gains annuels moyens pendant toute sa carrière.

Le versement des cotisations commencera le 1^{er} janvier 1966. Le paiement des premières prestations se fera en 1967 aux cotisants qui auront atteint, à ce moment là, l'âge de 68 ans; l'année suivante les prestations seront payées à ceux qui auront atteint l'âge de 67 ans et ainsi de suite jusqu'en 1970 alors que les personnes âgées de 65 ans seront susceptibles de bénéficier des prestations. Une pension entière sera payée à l'âge de 70 ans, même si la personne continue de travailler. Par contre, si une

personne qui a pris sa retraite à 65 ans retourne au travail avant d'avoir atteint 70 ans, sa pension sera réduite si les gains qu'elle reçoit dépassent \$900. Toutefois, les sommes qu'elle peut recevoir en vertu d'autres régimes de pensions, comme par exemple aux termes de la LPSP, ne comptent pas comme gains aux fins de la pension et n'entraînent pas la réduction des prestations du RPC.

Le RPC comporte un article qui se rapporte à la période transitoire. Il prévoit le versement d'une pension entière après dix ans de cotisations. Le régime prévoit également des prestations aux veuves et enfants à charge lors du décès d'un cotisant et le paiement de rentes avant l'âge de 65 ans, lorsqu'un cotisant devient invalide. Les prestations maximums en cas de décès qui seront versées en vertu du RPC seront à l'origine de \$500. Elles seront versées à compter de 1968.

Voilà les grandes lignes du RPC, bien que celui-ci comporte diverses autres modalités: les personnes qui prendront leur retraite avant d'avoir versé des cotisations pendant dix années, c'est-à-dire avant 1976, recevront des prestations établies au pro rata: en 1975, elles recevront les neuf-dixièmes d'une pension complète, en 1972, les six-dixièmes, et ainsi de suite; le Régime comporte une formule d'exclusion par laquelle le cotisant, sous réserve de certaines conditions, peut laisser de côté 15 p. 100 de ses mois d'emploi, lorsque ses gains étaient faibles ou qu'il était sans emploi; ce ne sont là que certaines des nombreuses modalités du Régime.

Intégration des deux régimes

Ce n'est qu'après le 1^{er} janvier 1967 que les effets de l'intégration du RPC et de la LPSP se feront sentir sur les prestations versées aux termes de cette dernière loi. Elle n'aura aucun effet sur le fonds de pension accumulé avant le 1^{er} janvier 1966, c'est-à-dire avant le jour où commencera le versement des cotisations au RPC. A la suite de l'intégration des régimes, la Loi sur la pension du service public sera supplémentaire au Régime de pensions du Canada plutôt que complémentaire.

Sous réserve des conditions suivantes, la principale modification sera que la formule de 2 p. 100 par année de service ouvrant droit à pension servant à calculer les prestations de retraite sera réduite à 1.3 p. 100 par année pour chaque année durant laquelle un fonctionnaire a versé une cotisation au RPC, à condition que les prestations du Régime soient alors payables. Ce 1.3 p. 100 s'appliquera relativement au salaire moyen utilisé pour le calcul des prestations de pension aux termes de la LPSP (six meilleures années) pourvu que le traitement soit moindre que le gain maximum ouvrant droit à pension en vertu du RPC au moment de la retraite. Lorsque la moyenne des six meilleures années par rapport à la LPSP est plus considérable que le gain maximum ouvrant droit à pension sous le RPC, le taux de 1.3 p. 100 ne s'appliquera qu'à concurrence de ses gains maximums. Tout gain dépassant ce maximum sera calculé d'après l'ancienne formule du 2 p. 100.

Cela semble très embrouillé, n'est-ce pas? Examinons les trois cas typiques mentionnés par M. Trudeau dans son discours à Calgary; nous réussirons peut-être à nous y retrouver parmi les diverses formules mentionnées. Le premier cas est celui du jeune homme qui entre au service public en 1966 après que le RPC est entré en vigueur; le deuxième, celui d'un fonctionnaire qui a vingt ans de service antérieur à 1966 et compte travailler encore quinze ans et le troisième est celui d'un fonctionnaire qui, ayant complété 35 ans sous l'empire de la LPSP avant 1966, compte travailler encore dix ans. L'idéal serait d'étudier le cas de chaque fonctionnaire et de le conseiller selon les circonstances, mais puisque la chose est impossible, ces trois exemples serviront peut-être à vous faire comprendre les points saillants de l'intégration.

Dans le cas du jeune homme qui entre au service public en 1966, supposons que ses gains au cours de sa carrière demeurent inférieurs aux gains maximums ouvrant droit à pension en conformité du RPC. Il commencera immédiatement à cotiser au RPC au taux de 1.8 p. 100 sur la fraction de son salaire qui dépasse \$600 et à la Caisse de pension du service public au taux de 4.7 p. 100 du même montant (soit un total de 6.5 p. 100) et à la fin de sa carrière, il recevra de la part du RPC des prestations égales à 25 p. 100 de ses gains moyens rectifiés et, aux termes de la LPSP, des prestations de 1.3 p. 100 pour chaque année ouvrant droit à pension, jusqu'au maximum de trente-cinq ans. Sa pension en vertu de la LPSP, à la différence des prestations reçues sous le RPC, qui se fondent sur les gains moyens rectifiés de sa carrière, continuera, bien entendu, de se fonder sur le salaire moyen de ses six meilleures années. Il se peut que ces deux prestations combinées pourraient constituer environ le même montant que les prestations de 70 p. 100 qu'il aurait reçues s'il était demeuré sous l'empire de la seule LPSP. Je regrette de ne pouvoir vous donner plus de précisions mais avec les nombreux changements qui, fatalement, seront apportés au RPC et à la LPSP au cours des trente ou quarante ans à venir, il est impossible d'être plus précis.

Notre deuxième exemple traite de l'homme qui a présentement vingt ans de service comme fonctionnaire et s'attend à travailler encore quinze ans; pour compliquer les choses nous allons supposer que son traitement moyen à l'âge de la retraite dépasse les gains maximums ouvrant droit à pension aux termes du RPC. Au moment de sa retraite, il recevra, aux termes de la LPSP, la prestation en entier, au taux de 2 p. 100 pour chacune des vingt années antérieures à 1966 et des prestations au taux de 1.3 p. 100 en vertu de la LPSP pour chacune des quinze années subséquentes, sur la partie de son traitement moyen qui est inférieure au maximum prévu par le RPC. Pour ce qui est de la partie de son traitement moyen qui dépasse le maximum prévu par le RPC, il recevra la prestation en entier au taux de 2 p. 100 en vertu de la LPSP. Résumons: il recevra la prestation en entier de 2 p. 100 pour les vingt années qu'il a servies avant la mise en vigueur du RPC, des prestations au taux de 1.3 p. 100 pour chacune des quinze années subséquentes, sur la partie de son traitement moyen éventuel qui est inférieure au maximum prévu par le RPC et des prestations de 2 p. 100 pour chacune des quinze années en question sur la partie de son traitement moyen qui dépasse le maximum prévu par le RPC. Comme je l'ai dit tantôt, il recevra également la pension entière prévue par le RPC, puisque la période de maturité est fixée à dix ans. La valeur de ses prestations combinées est légèrement plus élevée que la prestation de 70 p. 100 qu'il recevrait aux termes de la seule LPSP.

Le troisième cas est celui de l'homme qui a présentement trente-cinq années de service sous l'empire de la LPSP et compte cotiser au RPC durant les dix années à venir. Cet homme recevra la prestation en entier de 2 p. 100 pour chacune de ses trente-cinq années prévues par la LPSP et, bien entendu, ne cotisera plus sous l'empire de cette loi puisque la période contributive maximum est de trente-cinq ans. Toutefois, il devra cotiser 1.8 p. 100 de son salaire, dans les limites contributives prévues par le RPC au cours des dix prochaines années et à la fin de cette période, s'il se retire à l'âge de 65 ans, il recevra également la prestation en entier prévue par le RPC. En d'autres termes, il recevra une pension entière, tant en vertu de la LPSP qu'aux termes du RPC.

Pour donner de plus amples explications sur la formule d'intégration, nous pourrions reprendre le deuxième exemple, celui de l'homme qui est fonctionnaire depuis vingt ans, compte travailler encore quinze ans et touche un traitement qui dépasse le maximum prévu par le RPC. Supposons qu'il a 50 ans et que son traitement

au 1^{er} janvier 1966 est de \$8,000; supposons également que son traitement ainsi que le maximum prévu par le RPC, qui est de \$5,000, resteront les mêmes pendant les quinze ans à venir. Évidemment, ni l'une ni l'autre de ces suppositions est sérieuse, mais elles sont nécessaires pour expliquer le calcul qu'entraîne la formule d'intégration.

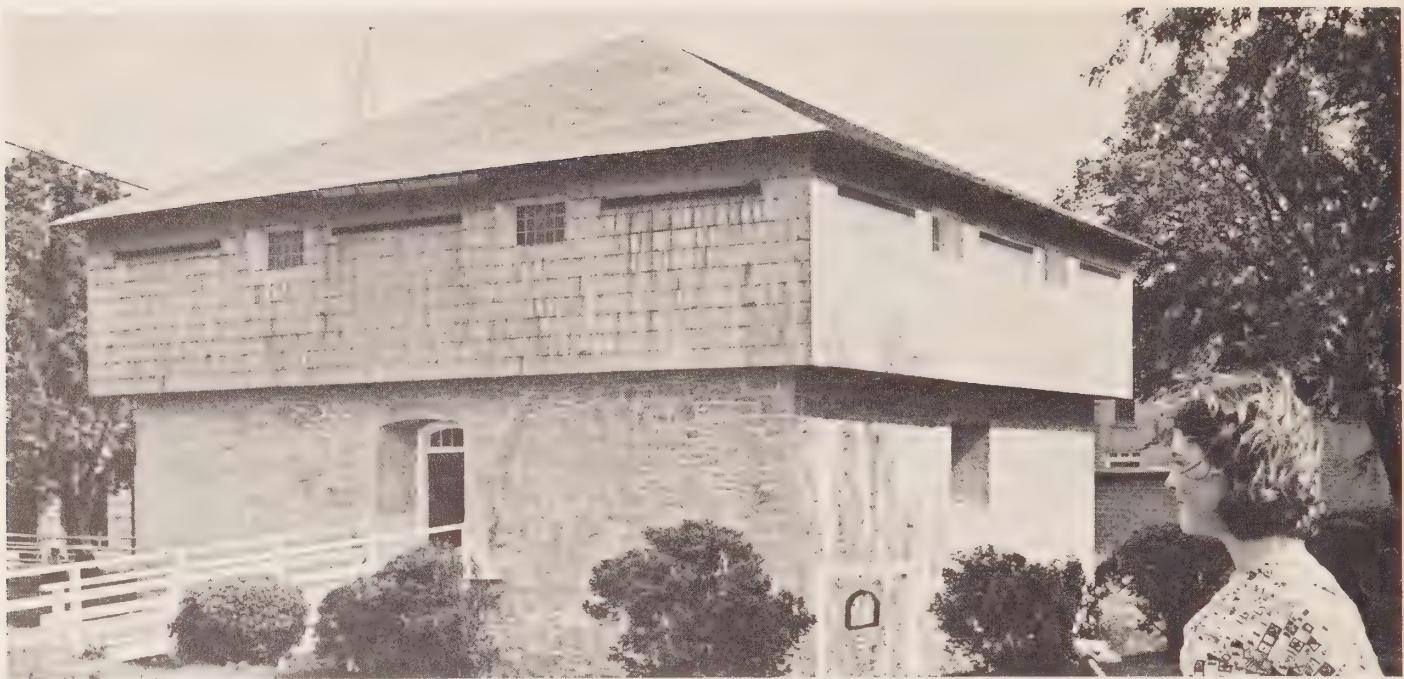
Au premier janvier 1966, ce fonctionnaire commencera à cotiser au RPC, 1.8 p. 100 sur la fraction de ses gains qui tombent entre \$600 et \$5,000 et à la Caisse de pension du service public, 4.7 p. 100 du même montant. Au même moment il continuera de contribuer à la Caisse de pension du service public 6½ p. 100 de la fraction de son traitement qui dépasse \$5,000, soit \$3,000 et, bien entendu, ne contribuera rien de ce montant au RPC. A propos, il est fort probable que ce fonctionnaire, aussi bien que les autres, contribuera en plus 6½ p. 100 de cette tranche de son salaire au-dessous de \$600, le montant minimum prévu par le RPC.

Lorsqu'il se retirera dans quinze ans, il sera susceptible de bénéficier, aux termes de la LPSP, d'une pension entière de 2 p. 100 pour chacune des vingt années antérieures à 1966, d'une pension de 1.3 p. 100 pour chacune des quinze années subséquentes, sur la partie de ses gains qui est inférieure à \$5,000 et d'une pension entière de 2 p. 100 pour chacune des mêmes quinze années sur la partie de son salaire qui dépasse \$5,000. Puisque nous avons supposé que son traitement de \$8,000 ne varierait point, son salaire moyen pour ses meilleures six années sera donc de \$8,000 et il recevra, par conséquent, à la fin de sa carrière, en vertu de la LPSP, une rente fondée sur 2 p. 100 de \$8,000 multiplié par vingt années, soit \$3,200, plus 1.3 p. 100 de \$5,000 multiplié par quinze années, soit \$975, plus 2 p. 100 de \$3,000 multiplié par quinze années ou \$900; donc, un total de \$5,075. Il recevra, par surcroît, une pension de \$1,250 prévue par le RPC puisqu'il y aura contribué au-delà de dix ans sur le montant maximum de \$5,000. Il recevra donc au moment de sa retraite, en vertu des deux régimes combinés, une somme globale de \$6,325. S'il s'était retiré avec des prestations de 70 p. 100 aux termes des dispositions actuelles de la LPSP, il aurait reçu \$5,600. Par conséquent, moyennant les mêmes cotisations, il recevra \$725 par année de plus qu'il n'aurait reçu autrement. Cet exemple confirme ce que j'ai dit tantôt, à savoir que de nombreux fonctionnaires seront passablement en meilleure posture grâce à l'intégration.

Jusqu'à présent, nous n'avons pas fait mention des prestations qui seront versées en vertu de la LPSP, aux veuves et aux enfants après l'intégration. A ce propos, il vous fera plaisir d'apprendre que la formule d'intégration ne leur portera aucunement atteinte et qu'ils recevront exactement ce qu'ils auraient reçu en conformité de la LPSP si celle-ci n'avait pas été modifiée et que par surcroît ils seront admis aux prestations versées aux veuves et aux enfants en vertu du RPC. Il s'ensuit donc que la plupart des veuves et des orphelins seront en meilleure posture qu'auparavant.

Nous n'avons pas répondu à toutes les questions mais on ne saurait dans un article de ce genre étudier chaque cas. Précisons cependant que ces deux régimes relèvent de deux organismes distincts: le Service des pensions de retraite du bureau du Contrôleur du trésor s'occupe de l'application de la LPSP, tandis que le RPC relève d'abord du ministère de la Santé nationale et du Bien-être social. Vous êtes invités à adresser vos demandes de renseignements sur l'un ou l'autre de ces régimes au ministère approprié.

Signalons en terminant que les prestations de sécurité de la vieillesse qui s'établissent à \$75 par mois ne sont aucunement touchées par l'intégration des régimes susmentionnés, mais qu'on doit toutefois en tenir compte lorsqu'on fait le calcul du revenu que l'on est en droit de recevoir à la retraite.



The exterior of the 130-year-old blockhouse at Merrickville, Ontario is virtually unchanged from its original construction. Used as a fortress to drive off warring Indians, the blockhouse was encircled by a moat (now filled in) and had a total of 12 gun slots at second storey level.

Helen Douglas, daughter of Col. and Mrs. Duncan Douglas, and Kathryn Parker, a guest of the Douglas's, use the squared-off staircase leading to the second floor. It was built by D.O.T. canal workers according to the 1820 blockhouse plans found in the Public Archives.



Merrickville Blockhouse Becomes Museum

With Canada's Centennial less than two years away, an ever-increasing awareness of our country's history is evident.

Individuals, governments, business, labor, universities and grade schools have all been busily rediscovering our past and searching for ways to present it in a fuller and more meaningful light.

The Department of Transport, too, is pitching in to help make Canadian history live.

For the past two years or so an old stone blockhouse at Merrickville, Ontario—about 40 miles from the Capitol—has been gradually restored to its original form and appearance.

Restoration completed, it has now been leased to the town of Merrickville to be operated as a museum by a municipally-appointed board of keenly interested citizens.

The Merrickville blockhouse, a pocket-sized edition of Hollywood's wild west fort, was built in the 1820's when Colonel By of the Royal Engineers came out from England to oversee the building of a canal from Ottawa to Kingston.

There were some 42 buildings of various kinds erected along the Rideau Canal in the 1820's and 30's, but the blockhouse at Merrickville is the only one which still exists in a form comparable to its original construction. The others have either been torn down or converted into one or two storey dwellings for D.O.T. canal staff. But at Merrickville the stone and wood exterior is virtually unchanged, and now the interior has been redone according to the original plans.



Helen peers through gun slots, while Kathryn sits on restored gunwalk and looks down to filled in moat. Boiling oil was poured through openings onto invaders who got close to blockhouse.



Col. Duncan Douglas inspects the massive stone fireplace in the second floor living quarters. The fireplace was recently rebuilt as part of D.O.T.'s restoration program.



A view of the second floor, showing living quarters partitions, top of the staircase and the massive beams which support the ceiling.

Over the years there have been several efforts to turn the old blockhouse into a museum. In 1938 the department gave some thought to turning it over to the federal Department of Mines and Resources, Lands, Parks and Forests branch, for preservation. The building, however, was in use as a storehouse for canal equipment and Transport decided it couldn't get along without it.

The department still needed it as a storehouse in 1945 when one of Merrickville's most prominent citizens, the late Harry F. McLean, offered to put on permanent display a collection of antique guns on behalf of the town.

In 1961, Deputy Minister Baldwin decided that the blockhouse was no longer essential for D.O.T.'s canal purposes. The department asked for the help of the Grenville historical society to decide on its possible future as a museum. In 1962 the society set up a provisional committee to meet with D.O.T. officials and the upshot was an agreement on a gradual restoration of the blockhouse.

The task was made easier by finding the original building plans tucked away in the Public Archives. First step was to cedar shingle the roof in the fall of 1962. The following year workers moved inside where the biggest job was to remove several partitions to check the second floor beams and replace them where necessary. The second floor fireplace was also rebuilt and the walls, partitions and gunwalks were restored.

By 1964-65 the basement, underpinning and first floor timbers got most attention. A new floor was required on the first floor, plus a new staircase leading to the second floor.

Meanwhile the town of Merrickville was working on the administration framework for the blockhouse. The municipality passed Bylaw 777 in the spring of 1965. This was done to take advantage of provincial grants which can only be made to a municipal corporation or a board or body created by it.

Duncan Douglas, a retired army colonel, and his wife Jane are two of the local citizens who have put a great deal of time and effort into the museum project. Colonel Douglas, who was appointed secretary of the museum committee, has acted as a liaison between the town and the department. He has done a great deal of research in order to advise D.O.T. on the blockhouse's original interior. Mrs. Douglas, as a member of the exhibits committee, has gone all around the countryside asking for and getting pledges of either donations or intentions to loan antique furniture, china and crockery, farm implements etc. She herself has donated a settee from the growing collection of Canadiana which graces the old graystone farm house the Douglas' moved into in 1960. (They had scoured the triangular area from Kingston to Montreal to Ottawa in the years prior to Col. Douglas's retirement searching for such a farm house until they found what they wanted overlooking the Rideau River near Merrickville.)

Merrickville's efforts and those of the Department of Transport have resulted in the preservation of an important era in the history of the Rideau Canal and the National Capital area. The blockhouse has a new lease on life—130 years after it was built—representing the very thing it was intended to be.

New Lock at Swift Rapids



Above: The D.O.T. canals division cruiser "Rideau", carrying Defence Minister Paul Hellyer and other officials at the opening of Swift Rapids lock, is seen after being lowered through the lock following the ceremony. Behind are other yachts carrying members of the official party. Some of the hundreds of Orillia district yachtsmen and cottagers who attended the affair can be seen on top of the \$2,000,000-plus lock.

Right: Defence Minister Paul Hellyer addressed the crowd during the ceremony in which the \$2,000,000-plus lock on the Severn River was officially opened. At left is Deputy Transport Minister John Baldwin and others visible are, from left, Dr. P. B. Rynard, M.P., of Orillia; D. A. H. Farmer of Ottawa, master of ceremonies; Hon. Leslie Frost, Rt. Rev. Msgr. J. K. Lee and Ingo Petersen, president, Orillia Chamber of Commerce. Hidden from the camera's view are Rev. P. C. Lewis, Mayor Isabel Post of Orillia, J. A. Addison, M.P., and W. D. Bennett, superintending engineer, Trent Canal.

Yachtsmen of the Lake Simcoe-Severn River section of the Trent Canal system turned out in hundreds for the official opening on August 21 of the department's new lock at Swift Rapids, on the Severn.

Officiating at the event was Defence Minister Paul Hellyer, who was introduced by Deputy Minister John Baldwin. Mr. Hellyer pulled the switch that opened the lock admitting three yachts aboard which the official party was taken down through the lock to symbolize its formal entry into service. Following the ceremony the official group made the scenic boat trip back to Sparrow Lake where refreshments were served.

Speakers included Mayor Isabel Post of Orillia, who expressed the community's satisfaction at the completion of the lock. She referred to the "bottleneck" that still existed six miles downstream at Big Chute, where the one marine railway on the Trent system still prevents big yachts from travelling through the entire system.

Hon. Mr. Hellyer said construction of a conventional lock at Big Chute was being held in abeyance while the question of whether or not such a lock would let sea lampreys into the Trent system was thoroughly investigated.

Hon. Leslie Frost, a native of Orillia, and Ingo Petersen, president of the Orillia and district Chamber of Commerce, were also speakers. D. A. H. Farmer, chief, canals division, was master of ceremonies. Rev. P. C. Lewis and Rt. Rev. Msgr. F. K. Lee of Orillia participated in the program. Others on the platform were W. D. Bennett, superintending engineer, Trent Canal; Dr. P. B. Rynard, M.P., Simcoe East, and J. A. Addison, M.P., York North.





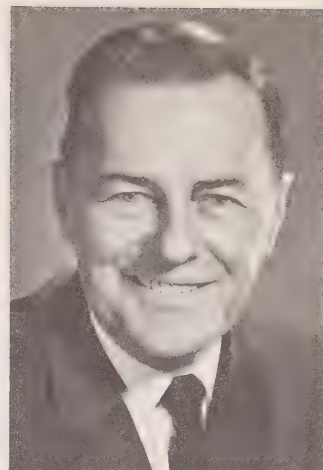
E. Winsor



D. R. Hemming



D. A. H. Farmer



C. Delisle

New Appointments

Eric Winsor

The appointment of Eric Winsor, 51, as director of the newly-created airports and field operations branch of air services was announced in August. In his new position Mr. Winsor, formerly chief, administrative services, will advise the assistant deputy minister of air services on the operation, maintenance and management of airport properties throughout the country.

A native of Wesleyville, Newfoundland, Mr. Winsor attended Prince of Wales College and Memorial University at St. John's, Newfoundland, and Queen's University, Kingston, Ontario. He was employed by the engineering firm of Fraser Brace from 1937 to 1941 and by Atlas Construction Company for the next four years. In 1945 he joined the civil aviation division of the Newfoundland government as business manager at Gander Airport. He continued in that capacity with the Department of Transport after Newfoundland's confederacy with Canada and, in 1951, was appointed airport manager.

Mr. Winsor came to Ottawa in 1956 to fill the then newly-created position of chief of administrative services. In recent months he has been responsible for directing the department's financial management implementation team, set up as a result of a Glassco Commission recommendation, and will continue to direct this work until its completion.

D. R. Hemming

Dennis R. Hemming was promoted to chief of the research and programming division of civil aviation in August.

A native of Dartmouth, N.S. Mr. Hemming has been a member of the research and programming division since 1961.

Mr. Hemming was a coastal command pilot flying Sunderlands on anti-submarine patrol during the war. In 1945 he enrolled at the University of New Brunswick, graduating with a BSc degree in 1949. He spent the next two years with the Department of Resources and Development in Ottawa in a research capacity.

From 1951-1961 he served with the RCAF as a construction engineer officer and pilot. Before joining the Department of Transport in 1961 he was project engineer for the construction of the Canadian Bomarc Missile bases.

He joined the department as an operational research officer and in January 1965 was appointed superintendent of master plans section.

D. A. H. Farmer

The promotion of Donald A. H. Farmer to the position of chief, canals division, of the marine works branch, was made in June.

Mr. Farmer fills the vacancy created by the transfer of J. N. Ballinger from the canals division post to the position of chief, aids to navigation, which is also in the marine works branch.

Mr. Farmer, 41, is a native of Owen Sound, Ontario. In 1945 he graduated in electrical engineering from Queen's University and spent the next six years with Canadian Westinghouse Company Limited. He joined the Department of Transport in 1951 and was stationed for a time with the Welland Canal staff as electrical engineer.

In April, 1954, he was transferred to headquarters at Ottawa and, when the canals division was reorganized in 1958 and part of its functions were transferred to the St. Lawrence Seaway Authority, he was named superintendent of construction and maintenance of the division.

In 1963 he became superintending engineer of the Trent Canal System on a reciprocal exchange basis and made his home in Peterborough. W. D. Bennett, who came to Ottawa at that time under the exchange arrangement, has returned to Peterborough as superintending engineer of the Trent system.

Charles Delisle

The appointment of Charles Delisle as regional controller of civil aviation at Montreal was made recently.

A native of Montreal, Mr. Delisle attended college at Mont Laurier, Quebec, and Laval University, graduating with a Bachelor of Arts degree in 1940.

During the Second World War he was a pilot in the R.C.A.F. and served with bomber command in England and North Africa. At the end of 1943, having completed 54 raids over Europe, he was awarded the DFC.

Returning to civilian life Mr. Delisle flew with Rimouski Air Lines (Quebecair Ltd.) until 1949 when he joined the Department of Transport as airport manager at Mont Joli, Quebec. In 1953 he was promoted to an airways inspector's position in the Montreal region. Five years later he became regional superintendent of airports in the same region.

Retirements

F. T. Collins

Frank T. Collins retired at the end of June after 46 years of government service. His lengthy career, which began as a stenographer, was highlighted by four Royal Tours and association with every Minister of Transport since the department was created in 1936.

Mr. Collins, a native of England, settled in Ottawa with his family and received his education at local schools. In 1917 he joined the Soldiers Civil Re-establishment Department, forerunner to the Department of Veterans Affairs, as a stenographer in the office of the Minister, Sir James Loughheed. He remained with that department until 1928 when he left the government service to become associated with the Newsprint Institute of Canada in Montreal.

In 1930 Mr. Collins rejoined the government as a private secretary in the Department of Railways and Canals. In 1936, when the Department of Transport was created, he became chief clerk in the office of the deputy minister. He was appointed secretary of the department in 1946 and held the position until his recent retirement.

During the 1939 visit of Their Majesties, King George VI and Queen Elizabeth, to Canada Mr. Collins was connected with the sub-committee on transportation and accompanied the Royal Tour across Canada. In 1952 he represented the department when Princess Elizabeth and Prince Phillip visited Canada and, in 1959, when she returned as Queen, he was chairman of the transportation and accommodation sub-committee of the Royal Tour Committee and again travelled with the Royal Party across Canada. He performed similar duties during the 1958 visit of H.R.H. Princess Margaret. Mr. Collin's duties as departmental secretary also took him to Britain in 1953 for the Coronation of Queen Elizabeth. He was aboard the CCGS d'Iberville, which took part in the naval review immediately following the Coronation.

Mr. Collins served in the reserve army from 1942 to 1948. As adjutant of the Cameron Highlanders of Ottawa, he attained the rank of Captain prior to retiring. Mr. and Mrs. Collins plan to remain in Ottawa, but to enjoy travelling when and where they please.

"It will be nice to make arrangements for ourselves", says the retired departmental secretary, "after having looked after the travel arrangements for so many others for so long."



H. R. Newcombe

Harold R. Newcombe, superintendent, radio authorization and enforcement, retired at the end of June after 37 years of government service.

Born at Yarmouth, N.S. in 1905, Mr. Newcombe moved to Simcoe, Ontario with his family and attended elementary and high school there. In 1928 he joined the old Department of Marine and Fisheries as a junior radio operator and was assigned to duty on the East Coast and in the Hudson Straits area. During the summer of 1929 he served aboard the Montcalm on the famed Hudson Straits expedition.

Mr. Newcombe was promoted to senior radio operator in 1930 and six years later was assigned to headquarters as an acting radio inspector. The following year he

was promoted to radio inspector and remained as such throughout the war, carrying out progressively more responsible positions. In 1954 he became a technical officer and in 1958 was promoted to superintendent, radio authorization and enforcement.

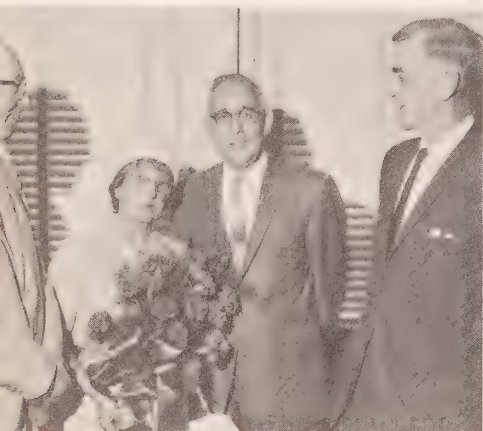
Mr. Newcombe looks forward to enjoying the days of retirement ahead with his wife and two daughters, Irene, 21, and Marilyn, 19.

J. H. Kay

Joseph Henry Kay retired early in July after 24 years of D.O.T. service. He had been controller of steamship inspection for the department since 1962.

Born and educated at Birkenhead, England, Mr. Kay served his apprenticeship as a marine engineer and then sailed for nine years as engineer officer aboard British merchant marine vessels.

Mr. Kay joined the Department of Transport in July, 1941 as a steamship inspector at Toronto. In 1952 he was promoted to senior steamship inspector. In 1955 he was transferred to Ottawa as principal inspector of machinery and was then promoted to controller of steamship inspection in 1962.



Above right: Mr. and Mrs. F. T. Collins

Above left: Controller of Radio Regulations W. A. Caton, Mr. and Mrs. Newcombe and Mrs. Pauline Fisher, formerly secretary to Mr. Caton.

Left: Assistant Deputy Minister, Marine, G. R. Stead, Mr. and Mrs. Kay, R. R. MacGillivray, director, marine regulations.

D.O.T. makes Awards to Ships' Weather Observers

For the past 17 years the meteorological branch has presented book awards to certain merchant and Canadian Government vessels for excellence in their voluntary work of making weather reports during voyages on the high seas, Canadian coastal waters and the Great Lakes.

Most maritime nations of the world enlist the aid of merchant vessels in obtaining weather data from the oceans. Indeed it is from the reports of these ships that most of man's knowledge of oceanic weather has been acquired. Out of a world total of about 4,000 ships, Canada has 122 ships which report weather conditions regularly for our benefit, and that of any other country which may receive their reports.

Four times a day, at fixed hours, the ships' officers take a few minutes out from their regular shipboard duties to record pressure, temperature, wind, humidity, clouds, visibility, waves, and several other aspects of the weather prevailing at the time. They transform all this information into a condensed code which is known the world over, and hand the report to the ship's radio officer who transmits it to the nearest coast radio station, which in turn relays it to the meteorological service of the country concerned. This message, together with hundreds of others, is used immediately by meteorologists ashore to prepare forecasts for the mariners themselves, for aviation, the general public, and numerous other agencies.

Since this work is, by tradition, voluntary, the meteorological branch presents these "Excellent Awards" annually to ships whose weather reports for the past year were of excellent standard in regard to both quantity and accuracy. The awards are a small tangible token of the branch's gratitude for work well done on its behalf.

This year the branch presented 55 awards to the captains and officers of 38 merchant and Government ships. The awards are always books of general interest to seamen. This year's selection was "Oceans—A Pictorial History of Man's Explanation of the Deep."



Dr. P. D. McTaggart-Cowan, centre, receives Patterson medal from J. R. H. Noble, director, meteorological branch. Applauding at left is Dr. Andrew Thomson, this year's other recipient of the coveted award.

Awarded Patterson Medal

Dr. Andrew Thomson and Dr. Patrick D. McTaggart-Cowan were honoured on June 8 by the presentation of Patterson Medals made at a luncheon of the Royal Meteorological Society (Canadian Branch) held at the Faculty Club of the University of British Columbia. The occasion was unique in that both recipients are former directors of the department's meteorological branch and the presentation was made by the present director, J. R. H. Noble.

The Patterson Medal award, established in honor of the late Dr. John Patterson on the occasion of his retirement as director of the Department of Transport's meteorological branch in 1946, is given for sustained contributions to Canadian meteorology over a period of years or for a single outstanding contribution by a Canadian to the advancement of the science.

Andrew Thomson, D.Sc., M.A., O.B.E., a native of Dobbington, Ontario, was director of the meteorological branch from 1946 to 1959. Prior to joining the branch in 1932, Dr. Thomson had been associated with Thomas A. Edison in research during World War I. He played a leading role in a number of scientific expeditions, served as director of the famous Apia Observatory in Samoa and as aerologist in New Zealand. Dr. Thomson was made an officer of the Order of the British Empire in 1946, awarded the Gold Medal of the Professional Institute of the Public Service of Canada in 1952 and received the Honorary Degree of Doctor of Science from McGill University in 1958. The citation accompanying the Patterson Medal award noted his outstanding contributions to Canadian meteorology

for more than 25 years and emphasized his leadership in forging a link between the universities and the government service, and his service to international meteorology through his lengthy membership on the Executive Council of the World Meteorological Organization.

Patrick Duncan McTaggart-Cowan, D.Sc., M. B. E., a native of Scotland, came to Canada as a youth and graduated from the University of British Columbia in 1933. He attended Oxford University as a Rhodes Scholar and received an honors degree in Natural Sciences in 1936. Dr. McTaggart-Cowan joined Canada's weather service in 1936 and was appointed director in 1959. He resigned in early 1964 to accept his present position as President of Simon Fraser University at Burnaby, B.C. He was made a Member of the Order of the British Empire in 1946 and in 1959 received the Robert M. Losey Award from the Institute of Aeronautical Sciences in recognition of his outstanding contributions to the science of meteorology as applied to aeronautics. In 1961 his alma mater conferred upon him the honorary degree of Doctor of Science.

The citation accompanying the Patterson Medal award to Dr. McTaggart-Cowan noted his sustained contributions to Canadian meteorology and emphasized his role in the development of meteorological services for trans-Atlantic aviation and in international meteorology, his leadership in the development of meteorological services, and his encouragement of meteorological research within the government service and at Canadian universities.

Dateline--Across Canada



Ottawa—A new Alouette III helicopter, for use by the Canadian Coast Guard and in other marine services work, is one of the department's latest acquisitions in the realm of aviation. It was accepted from the manufacturers, Sud-Aviation S.A. of France, during a ceremony at Ottawa International Airport and was put into service aboard the Eastern Arctic Patrol ship CCGS "C. D. Howe".

The helicopter will carry a pilot and six passengers. It is turbine powered with a Turbomeca Artouste IIIB engine developing 870 horsepower. Equipped with floats and a full load it has a cruising range of 350 nautical miles, or three hours and 15 minutes flying time. It has a maximum speed of 113 knots and an average cruising speed of 195 knots. On short hauls it can carry up to 1,600 pounds of freight.

The machine has a rescue hoist and is

suitable for both general ship-to-shore work and search and rescue operations. When not used in Arctic operations it can be used for other ship-based work such as light-house supply duty at points where beach landings are not practical, and for aerial ice reconnaissance.

Edmonton—When S. A. Shatford, a radio inspector at Edmonton, was clearing papers out of his desk prior to his retirement, he came across an interesting letter, dated 1916. It was among papers which had belonged to his father, a former mayor of Vernon, B.C., and was written by the mayor of Vancouver. It read:—

Dear Mayor Shatford:—

This letter will be presented to you by Captain E. C. Hoy, C.F.C., who is making the first attempt to cross the Province of British Columbia to the

adjoining Province of Alberta by air transport.

A successful flight over the Cascade, Selkirk and Rocky Mountain Ranges, within the time limit set for the event, will go far to prove the stability and practical worth of aerial navigation and greatly assist in the establishing of the much desired closer union between our Coast cities and the centres of population in the progressive interior and Eastern portions of the Province.

I know you will give a fitting welcome to Captain Hoy on this memorable occasion.

Yours truly,

R. H. GALE

Mayor.

The envelope bore the postal cachet "1st B.C.-Alberta Aerial Post."

Toronto—The first two-year course for the Master's degree in meteorology at the University of Toronto ended this spring with nine graduates. Seven are employed by the meteorological branch, one has transferred to the Department of Agriculture and one has since resigned from D.O.T.

Inaugurated at the University of Toronto in 1963 the course allows more time for research and thesis work as well as for advanced courses in specialized fields. The first year is an academic year followed by two months of "Advanced Forecasting Training" by the meteorological branch. The second year is devoted primarily to research studies and thesis but it includes advanced courses in selected specialized fields such as hydrometeorology, micro-meteorology, numerical weather prediction and cloud physics.

Meteorological branch training staff participate in lecturing, laboratory instruction and research and thesis supervision.

Recent Suggestion Award Winners

NAME	POSITION	LOCATION	AMOUNT
E. G. Begin	clerk	Parry Sound, Ont.	\$10
R. H. Blanchette	accountant	Winnipeg	\$10
Mrs. Shirley Chapman	stenographer	Ottawa	\$10
W. J. Charters	clerk	Ottawa	\$10
A. H. Cooke	radio operator	Sandspit, B.C.	\$20
Arthur Emery	draftsman	Ottawa	\$10
Gerald G. Gray	storeman	Winnipeg	\$10
F/L E. D. Hoepfner	meteorological officer	No. 4 Wing RCAF	\$10
J. M. MacDonald	supervisory clerk	Charlottetown, P.E.I.	\$30
Gordon E. Miller	radio operator	Fredericton, N.B.	\$30
John Milnes	radio inspector	Kingston, Ont.	\$30
Edouard J. Pitre	clerk	Moncton, N.B.	\$15

HEADQUARTERS PICNIC — 1965



Canadian Coast Guard ALBUM



CCGS "Camsell", the only Canadian Coast Guard icebreaker based on the West Coast, was completed in October, 1959, at the yard of Burrard Dry Dock Company, Vancouver, B.C. She is attached to the Victoria District Marine Agency and each year makes a four-months-long trip around Alaska to support Arctic supply operations along Canada's northwest Arctic coast as far east as Spence Bay on Boothia Peninsula. When not thus occupied, she performs lighthouse supply and buoy tending duties in her home waters.

CCGS CAMSELL

LENGTH: 223 feet, seven inches.

BREADTH: 48 feet.

DRAFT: 16 feet.

POWER: Diesel-electric; Fairbanks-Morse diesels; Canadian Westinghouse generators and propulsion motors; 4,250 shaft horsepower.

GROSS TONNAGE: 2,022.

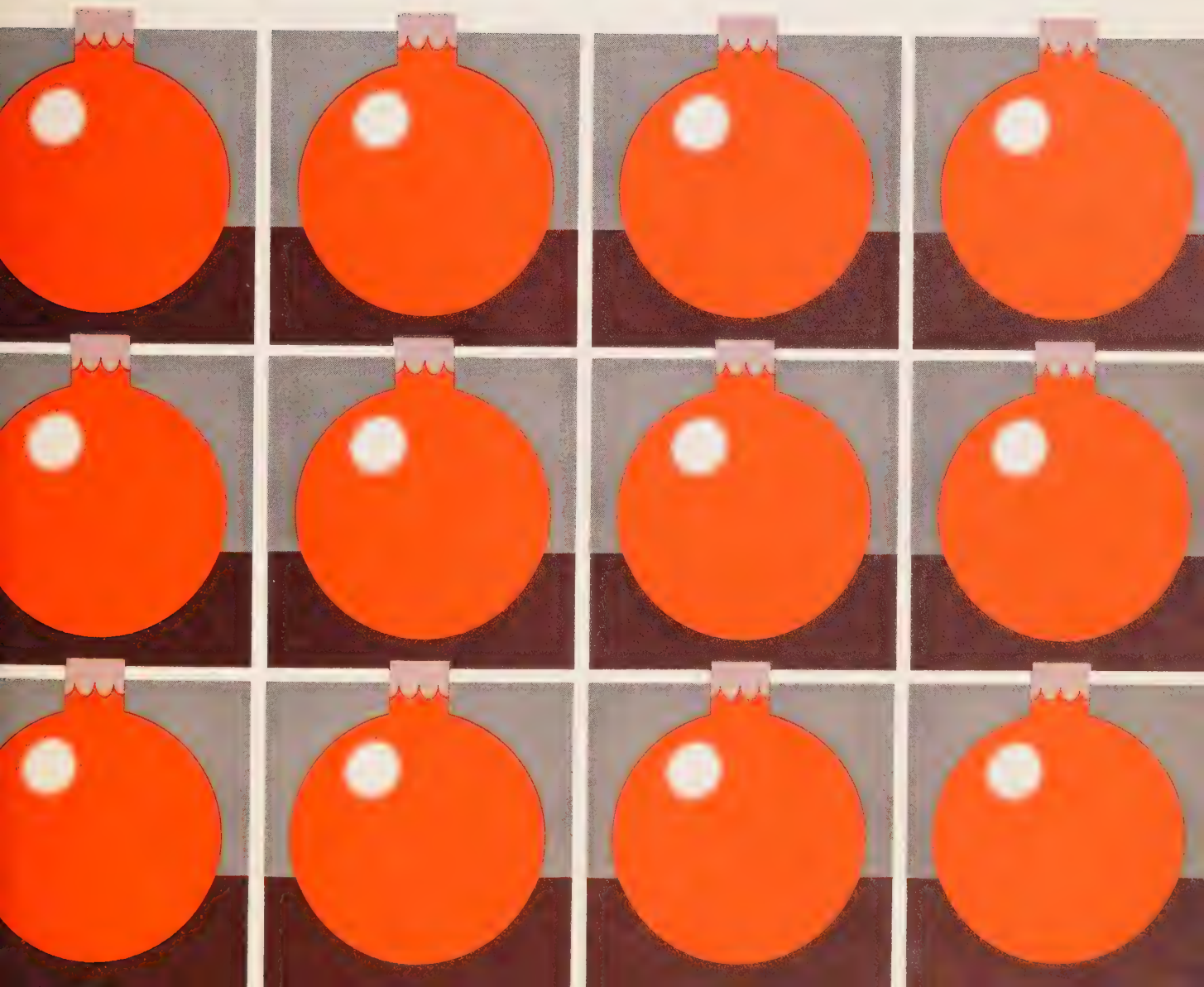
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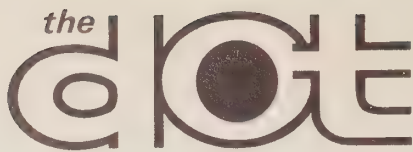
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november/december 1965

Target: Canada





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Yvonne McWilliam

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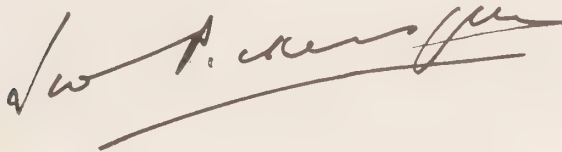
Did You Know?

- Canada's lowest temperature ever, 81 degrees below zero, was officially recorded at Snag, Yukon on February 3, 1947.
- Canada's highest temperature, 115°F, was officially recorded at Gleichen, Alberta on July 28, 1903.
- Less snow falls in the Arctic than practically anywhere else in Canada.
- Fifty hurricanes have visited Canada in the last 50 years.
- Canada has added two words to the weatherman's dictionary—chinook and blizzard.
- A desert is a place getting less than 10 inches of rain a year. Parts of British Columbia are desert by this definition.
- Canada's weather service is 28 years older than Canada—it began in Toronto in 1839, 126 years ago.
- Daylight saving time was invented in Canada.
- The windiest place in Canada is not the corner of Portage and Main in Winnipeg, but Cape Hopes Advance in Northern Quebec.
- Despite talk of "April showers", April is not the rainiest month in Canada—in fact, in most parts it is one of the least rainy.
- The most northerly weather station in Canada is at Alert on Ellesmere Island, 600 miles from the North Pole.
- The highest weather station in Canada sits atop Old Glory Mountain in southern B.C.
- One hundred years ago grammar schools were required by order to take daily weather observations.
- Despite the old saying, the fact is that it is never too cold to snow.
- Tornadoes do occur in Canada. Regina suffered severe damage from one in 1912, and Sarnia was heavily hit in 1957.

*Christmas has about it a
universality of mood if not of place.
Traditionally, it is a time to exchange
greetings with friends and family, a time to
think of others, to review the
tasks we have accomplished and ponder
a little what lies ahead.*

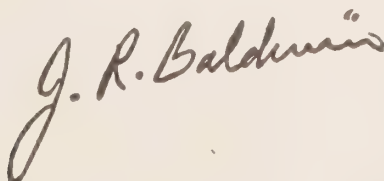
*I welcome this opportunity to extend
to you and your families my warmest
Christmas greetings and good wishes
for a peaceful and prosperous New Year.*

*I should like, as well, as
Minister of Transport, to express my
appreciation for your fine service to the
department throughout the year.*

A handwritten signature in dark ink, appearing to read "J. R. Baldwin". The signature is written in a cursive style with a long, sweeping underline.

*Once again the sparkling season is
with us. The most joyous of holidays
passes on to the ending and the beginning that
mark the New Year.*

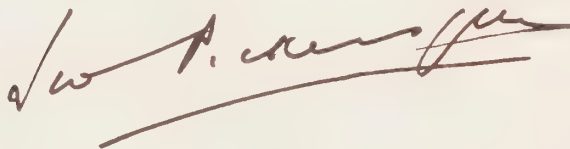
*Once again I send my thanks
to all of you for the service that made 1965
a good year for the Department of
Transport; and once again I seek your help in
our continued goal of service in 1966.*

A handwritten signature in dark ink, appearing to read "J. R. Baldwin". The signature is written in a cursive style with a long, sweeping underline.

*L'esprit de Noël se retrouve sous
toutes les latitudes. C'est l'occasion
d'échanger des souhaits avec les amis et la
famille, de songer à autrui, de faire
le point sur le travail accompli,
de s'interroger sur l'avenir.*

*J'en profite pour vous formuler
mes vœux les plus sincères d'un
joyeux Noël et d'une Nouvelle année dans la
paix et la prospérité.*

*A titre de ministre des Transports,
je vous remercie d'avoir collaboré
avec tant d'ardeur à l'œuvre du Ministère
durant l'année écoulée.*

A handwritten signature in dark ink, appearing to read "J. R. Baldwin", with a long horizontal flourish underneath.

*C'est de nouveau la période des
Fêtes qui fait le pont entre l'ancienne
et la Nouvelle Année.*

*De nouveau, je vous remercie
de l'ardeur au travail que vous
avez manifestée au cours de l'année qui
s'achève, et grâce à laquelle le ministère des
Transports a abattu une besogne
considérable. Je souhaite que cet effort se
poursuive en 1966, et je compte sur
votre précieuse collaboration.*

A handwritten signature in dark ink, clearly legible as "J. R. Baldwin", with a stylized flourish at the end.



J. Roy Baxter



Gordon C. Tilley



Emile D'Aoust

New Appointments

J. Roy Baxter

J. Roy Baxter, assistant deputy minister, personnel and administration, has been appointed D.O.T. representative at Canada House in London, England. He assumed his new duties in mid-November.

For some years the department has had a civil aviation and telecommunications representative at Canada House. It has now been decided to appoint a representative to London to deal with the whole area of departmental activity. W. R. Butler, who has been acting as civil aviation and telecommunications representative, has returned to Canada.

Mr. Baxter goes to London for a two-year term. He will keep abreast of major policy developments in the field of transportation in Britain, particularly as they affect D.O.T. general operations and regulatory practices. He will also assist External Affairs, as required, in policy exchanges or negotiations with British ministries. As well he will participate as an observer, or as a delegate, at special meetings and conferences where departmental representation is needed.

Mr. Baxter was born at Carleton Place in 1908 and received his education at Smiths Falls and Ottawa. He began his government career with the former Department of Immigration and Colonization and served in Ottawa, Indianapolis, Chicago, Regina and Winnipeg. In 1934 he was appointed to the Canada Travel Bureau when that organization was first established and moved from there to become chief personnel officer, air services, on the creation of the Department of Transport in 1936. In 1948 he became chief of personnel and seven years later, director of administration and personnel. He was appointed assistant deputy minister, personnel and administration, in April of this year.

Mr. Baxter has been interested in the development of several associations and organizations in Ottawa. One of the founders of the Civil Service Recreational Association (The R.A.), he is a past president and was on the Board of Directors for 25 years.

Gordon C. Tilley

Gordon C. Tilley was appointed senior financial adviser of the department effective November 15. In his newly-created position Mr. Tilley will report to the deputy minister.

A native of Ottawa, Mr. Tilley graduated from Queens University in 1936 with a Bachelor of Commerce degree. He joined the firm of Geo. A. Welch and Co. and in 1940 qualified as a chartered accountant. He joined Cockshutt Plow Co. Ltd. in Brantford in 1941 and later became secretary-treasurer of that company. In 1946 he resigned to join the H. J. Heinz Co. of Canada Ltd., as comptroller. He was given the added duties of secretary-treasurer of the company in 1950 and a year later was elected to the board of directors.

Mr. Tilley returned to Ottawa in 1955 to serve as vice-president of Robertson Pingle and Tilley Ltd. In addition to his interest in this firm, in 1957, he became a director of the management consulting firm of W. Wallace Muir and Associates which later merged with Price, Waterhouse and Company.

Mr. Tilley has had considerable experience in government financial matters as a result of consulting assignments. In 1961 and 1962 he was engaged on several assignments with the Glassco Commission and in 1963 was involved in a major financial management study in the Department of Agriculture.

Mr. Tilley is a Fellow of the Institute of Chartered Accountants of Ontario. He is a past president of the Ottawa Board of Trade and of the local Chartered Accountants Association.

Emile D'Aoust

Emile Daoust, 58, former chief architect, standard terminals and general buildings, has been appointed as successor to George W. Smith, director of the air services construction engineering and architectural branch.

Mr. Daoust, a native of Montreal, received his primary and secondary schooling in Montreal and began his studies in architecture at the Ecole des Beaux Arts (University of Montreal) in 1924.

In 1930 he graduated, winning a travelling scholarship in architecture which took him to continental Europe. On his return he joined the architectural department of the City of Montreal as a junior architect and designer. In 1934 he went to Europe again for a year, furthering his studies in Holland, France, Belgium and Spain.

He entered the Quebec Government service in 1935 as an architect. In 1939 he returned to the service of the City of Montreal remaining there until he joined the Royal Canadian Corps of Engineers in 1941. He became camp engineer at Valcartier military camp, where he served until 1945. He attained the rank of captain. He then went back to Montreal, again in the city service, and became assistant chief architect in 1947. Nine years later he was named chief architect. He joined the Department of Transport air services in 1959 and was appointed chief architect, standard terminals and general buildings, in January, 1965.

Mr. Daoust is a member of the Royal Architectural Institute of Canada and of the Province of Quebec Association of Architects.



Mont Gabriel Lodge

D.O.T.'s senior management people will soon have a chance to study the problems of introducing a decentralized system of financial management, as well as the latest in management concepts, with leading business executives, university professors and public servants.

Two groups of 65 D.O.T. officers each, ranging from branch directors to division chiefs and their field counterparts, will attend management seminars at Mont Gabriel Lodge near Montreal. The lodge affords a comfortable retreat atmosphere away from business interruptions. The first group will convene January 3-14 and the second from April 11-22. It will be the first time that senior representatives from air, marine and the various administrative services across Canada will meet together.

These seminars have been timed to take place before the start of the 1965-66 fiscal year in view of the steady progress towards implementation of the new financial management plan outlined in the November/December issue of the D.O.T.

The seminars, which are unique in the public service, will examine the fundamentals of the new system, delegation and accountability, and the implications for senior management and the department as a whole. Their aim is to answer the "what" and "why" of the new management system. The department's implementation team, through field visits, will instruct employees in the "how".

Deputy Minister John R. Baldwin, believing that a government department could benefit from the successes experienced by private industry with senior management courses, asked the training and development division to organize these seminars and handle the many details of planning. The seminars will be directed by Darrell DeBow, chief of the division, with Don

Black, the division's superintendent of research, as program co-ordinator.

In order to tailor the program to the problem of introducing a whole new philosophy of management, the department engaged an expert in the management field. Dr. F. D. Barrett, director of Queen's University Executive Development Program, was the man selected for the job. He has had considerable experience in setting up and running executive development programs for the Canadian Forces, CNR and Aluminum Company of Canada, to mention but a few.

Dr. Barrett's seminar formula goes from the general to the particular and wherever possible each topic is examined from three standpoints:

- (1) Examination of each concept itself with speakers from Canadian universities and industry.
- (2) Examination of each concept in relation to government, using the experience of leading public servants in other departments.
- (3) Examination of each concept in relation to D.O.T. itself with speakers from the department.

By this technique Dr. Barrett hopes to expose the real nature of the changes in D.O.T.'s management philosophy—changes which place D.O.T. in a leading role in forward-looking management in the public service. They will delve into the theory of the new management and its challenges so that senior personnel will be cognizant of the policy framework in which they will operate.

By means of adequate financial and statistical reports managers will set up their own long and short range goals, and budget to achieve them. There will be new re-alignments of responsibilities. Field officers will carry out the operations and have authority to

New D.O.T. Management Philosophy topic of Senior Management Seminars

make operational decisions. This will enable headquarters staff to devote more time to the development of policies, to setting departmental objectives and developing long range plans to accomplish them, to setting standards and control procedures, to the application of new technology to departmental operations and similar duties designed to ensure progress, in pace with the times.

With these sorts of objectives it is not surprising that the seminars looking into the new philosophy will delve into the very basis of management. Titles of talks include Modern Management Concepts; Stages In Management Thinking; The Manager's Role in Innovation; Centralization versus Decentralization; The Role of Staff in Relation to Line in a Decentralized Organization; and Problems in Delegation.

Of course, not all will be theory. Dr. G. F. Davidson, secretary of the Treasury Board, will speak on "Changing Management Concepts and Practices in the Public Service; Trends and Directions". Mr. Ronald Ritchie, formerly executive director of the Royal Commission on Government Organization, will deal with the subject of "Management Recommendations in the Glassco Report"; Deputy Minister of Finance R. B. Bryce will speak on "Financial considerations in the formulation of government economic policy". Mr. D. R. Yeomans, assistant to the secretary, Treasury Board, will discuss "The Role of Treasury Board".

Dr. J. E. Hodgetts will be the speaker at the wind-up banquet. A well-known author and the outstanding authority in the field of public administration, Professor Hodgetts was editorial director of the Royal Commission on Government Organization. His subject will be "The Future of Public Administration".



Dr. F. D. Barrett

D.O.T. itself will be closely examined. The Minister will speak on the department's role in Canadian society. D. G. Tilley, senior financial adviser, and Eric Winsor, chief, airports and field operations, will outline the new system of financial management. Deputy Minister Baldwin will discuss line-staff relationships under the new system and there will be many other D.O.T.-oriented lectures.

Several sessions will be devoted to "experience reports" including the decentralization experience of CNR and the management philosophy of Dominion Electrohome. Actual case studies from the files of the Harvard Business School will also be used to see what happens to an organization which changes from a centralized to a fully decentralized system.

As well, the implications of the new system on the human elements in the department have not been neglected. Mr. J. J. Carson, Chairman of the Civil Service Commission will speak on the new role of the Civil Service Commission in its relation to government departments and Mr. J. D. Love, Assistant Secretary, Personnel Policy, Treasury Board will elaborate on those aspects of personnel management coming under the aegis of the Treasury Board. Mr. W. A. MacPherson, Director General, Personnel and Mr. J. I. Carmichael, Director Management Services will be on hand to elaborate on the professional staff service capabilities. These are being developed in such areas as personnel administration, management services and training and development in order to help managers who have problems in these areas and who seek these services. Much of the second half of the seminars is devoted to the study of the impact the new system will have on D.O.T. people.

The topic headings reveal that the seminars are not intended to provide a handbook of "do's and don'ts"—Dr. Barrett hopes heads will not end up merely saturated with facts. Only one third of the seminar time is devoted to lectures; the rest is for participation and discussion.

The topics have been chosen in such a way that the manager will tend to look at the department in relation to Treasury Board and the Civil Service Commission and the development and policies of the public service as a whole.

They are intended to provoke thought and provide understanding as D.O.T. embarks on its new way of management life which should shortly be reflected at all levels of department operations.

The Department of Transport provides a great many services to the Canadian people, services which must keep pace with the technological revolution which is sweeping the world.

We in the Department of Transport are continuously striving to meet the needs of Canadians wherever they may be located. I believe that our new management system will enable our field managers to provide on-the-spot services of the highest calibre. At the same time our managers at headquarters will be able to keep abreast of change and contribute to the progress which is the mark of this generation.

J. W. Pickersgill

The decision to introduce new arrangements regarding financial management will increase the responsibilities of senior officers at headquarters and in the field. The change in our way of conducting the business of the department and the re-alignment of duties in certain instances will create new problems for which there are no easy solutions. It is essential that senior administrators acquire an appreciation of the principles upon which management decisions should be based.

The experience of the financial management implementation team has also confirmed the department's earlier impressions that the implications of the new plans will extend beyond the development of a financial organization and the introduction of a new set of financial procedures. The management of physical and human resources must also be modified in keeping with the new concepts. In effect, the total management philosophy and system of the department is in a state of change which reflects the trends which are taking place in the public service as a whole.

The objective of this seminar is to review the problems which face us and discuss the impact the new concepts will have. I believe the experts we have selected to lead the discussions will be able to give an insight into the "what" and the "why" of the new management system. If everyone has an appreciation of these implications, implementation should follow with less difficulty.

J. R. Baldwin

Les membres du personnel de direction du ministère des Transports auront bientôt l'occasion d'étudier, sous la conduite de personnalités des milieux d'affaires, de professeurs d'université et de fonctionnaires, les problèmes que pose la décentralisation de la gestion financière ainsi que les théories les plus récentes dans le domaine de la gestion.

Deux groupes de fonctionnaires du ministère des Transports, comptant chacun 65 personnes, et comprenant des directeurs et des chefs de division affectés au bureau central, ainsi que des chefs de divers bureaux extérieurs, participeront à des journées d'étude sur ce sujet à l'auberge du Mont-Gabriel, près de Montréal. En plus d'offrir tout le confort nécessaire, cet endroit est un oasis de tranquillité où on n'a pas à craindre les interruptions de son milieu de travail.

Les membres du premier groupe se réuniront du 3 au 14 janvier et ceux du second, du 11 au 22 avril. Ce sera la première fois que des fonctionnaires supérieurs des services de l'Air, de la Marine et des divers services administratifs du Ministère par tout le Canada auront l'occasion de se réunir.

La date de la tenue de ces journées a été fixée de manière qu'elles aient lieu avant le début de l'année financière 1965-1966, étant donné les progrès constants accomplis dans l'application du nouveau programme de gestion financière dont les grandes lignes ont été exposées dans la livraison de novembre/décembre de notre revue.

Ces journées d'étude, qui auront lieu pour la première fois au sein de la fonction publique, permettront aux participants d'étudier les principes fondamentaux du nouveau système, à savoir le principe de la délégation et celui de la responsabilité, ainsi que les répercussions qui en résulteront pour le personnel de direction et l'ensemble du Ministère. Ces journées ont pour but de définir le nouveau système de gestion et de motiver son établissement. Il incombera à l'équipe d'application du Ministère, à l'occasion de visites dans les divers bureaux extérieurs, de renseigner les employés sur les moyens qui doivent en favoriser l'application.

Le sous-ministre des Transports, M. John R. Baldwin, étant persuadé qu'un ministère de l'État pourrait profiter des heureux résultats qu'ont connus les entreprises privées grâce à l'institution de cours à l'intention du personnel de direction, a demandé à la Division de la formation et du perfectionnement d'organiser des journées d'étude et de s'occuper des nombreux détails de l'organisation. Les journées seront sous la direction de M. Darrell DeBow, chef de la division; M. Don Black, surintendant des recherches à la même division, agira en qualité de coordinateur du programme.

Une nouvelle conception de la gestion fera l'objet de journées d'études

Afin d'organiser le déroulement du programme de manière à étudier le problème que pose l'établissement d'une conception toute nouvelle de la gestion, le Ministère a fait appel aux services d'un spécialiste dans ce domaine, en la personne de M. F. D. Barrett, directeur du programme de perfectionnement du personnel de direction établi par l'Université Queen's. Ce dernier a acquis une vaste expérience dans l'établissement et l'organisation de programmes de ce genre à l'intention des Forces armées du Canada, du personnel des chemins de fer Nationaux du Canada et de la Compagnie d'aluminium du Canada, pour n'en mentionner que quelques-uns.

Au cours des journées d'étude qu'il organise, M. Barrett veut faire passer les participants du général au particulier et, dans la mesure du possible, il désire leur faire étudier chaque sujet sous trois aspects différents:

(1) Étude de chaque sujet avec la collaboration des personnalités des universités et des entreprises industrielles du Canada.

(2) Étude de chaque sujet en fonction du domaine gouvernemental, en faisant appel à l'expérience de fonctionnaires supérieurs d'autres ministères.

(3) Étude de chaque sujet en fonction du ministère des Transports, avec la collaboration de fonctionnaires du Ministère.

voir suite à la page 14



Jim Baker studies in his room at residence



Lois Bateman takes notes at lecture



Cathy Kendall and her father

\$2,500 Awarded to D.O.T. Scholars

The names of the five 1965 winners of D.O.T. scholarships were announced in September.

James W. Baker, Gander, Nfld.;
Lois E. Bateman, Moncton, N.B.;
Catherine Kendall, Toronto, Ont.;
Nancy Jane Dobson, Dartmouth, N.S.;
John Harris, Ottawa, Ont.

With the department's scholarship program now in its third year this brings to 11 the number of sons and daughters of D.O.T. employees who have won a financial assist with first year university expenses. In 1963 \$400 scholarships were awarded to Roberta Pattison of Saskatoon, G. Kenneth Hryciw of Edmonton and Howard Baker Jr. of Gander. In 1964 the winners were Denise Stone of St. John's Nfld., Krystyna Tusiewicz of Toronto and Marilyn Clysdale of North Bay.

An increase in the principal invested, and a subsequent rise in the interest earned, made it possible this year to add to both the number and amount of the scholarships so it was decided to have five \$500 awards.

The scholarship program was established in 1962 with money donated by employees who had belonged to the department's group insurance plan prior to the introduction of the comprehensive government surgical-medical insurance plan. Surplus money was returned to D.O.T. by the insurance company and contributors to the plan were given the opportunity of receiving a refund or donating it to a scholarship fund. In all, some \$60,000 was donated and a board of trustees was set up to administer the fund.

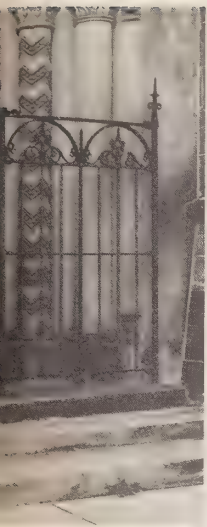
To be eligible a student must first be a dependent of an active or retired D.O.T. employee. As well, he or she must not be in receipt of scholarships valued at more than \$1,000. They can

receive \$500 in other awards and the D.O.T. one, or \$500 to \$900 in others and an equally reduced portion of the D.O.T. one.

This year 41 aspirants from across Canada applied. Their applications were turned over to the scholarship committee of the Canadian Universities Foundation, which assessed each one on the basis of scholastic standing and personal qualities.

Serving on the committee were Professor Allan Earp, registrar of Carleton University, Ottawa, who acted as chairman; K. J. Cleary, registrar of Halifax's Saint Mary's University; R. R. Jeffels, registrar of the University of Victoria; Dr. Claude St. Arnaud, registrar of the University of Montreal and Dr. J. K. Watson, registrar of the University of Western Ontario, London. After careful consideration they selected five winners, plus 10 alternates, in the event that any of the winners would have to decline. As it was three did—Heather Murphy, daughter of Mrs. Margaret Murphy, senior stenographer, Toronto region air services; William Doubleday, son of W. B. Doubleday, inspector-in-charge of radio regulations at Kingston and Derek C. Oppen, son of Captain F. C. Oppen, assistant port manager, National Harbours Board, Montreal. All had won other scholarships valued at more than \$1,000.

The five 1965 winners are now well into first year studies at their respective universities and each has expressed thanks to the employees of the department for the most welcome assistance. The department and their parents are proud of these young men and women. Perhaps, proudest of all is Gander Radio Technician Howard Baker. In 1963 his oldest son Howard received one of the D.O.T. scholarships and this year son James topped the list of 1965 winners.



of T. residence



Nancy Dobson shows D.O.T. cheque to Dad



John Harris checks a reference at McGill Library

James Baker

Jim, 17 years old, is a native Newfoundlander. He received his education in Gander primary schools and graduated from the Gander Collegiate last year. He is now enrolled in first year engineering at Memorial University in St. John's.

Jim's interests include stamp collecting, chess and curling.

Lois Bateman

Eighteen-year-old Lois is the daughter of Chesley Bateman, storeman at Moncton region air services, who has been a D.O.T. employee for the past 16 years.

She obtained her elementary and high school education in Moncton, graduating from Harrison Trimble high school last spring. Throughout high school Lois maintained an honors average along with being active in several extra-curricular activities. She played badminton, volleyball and soccer and won the ladies singles championship at a local badminton club last spring.

Lois is now in her first year at Dalhousie University, enrolled in courses leading to a Bachelor of Science degree. She plans to major in biology or chemistry.

Catherine Kendall

Daughter of G. R. Kendall, a meteorologist in the climatological division of the meteorological branch, Catherine is 18 years old. She received her elementary schooling at Port Credit, Ontario and attended T. L. Kennedy high school at Cooksville.

Cathie graduated with an 84 percent average on Grade 13 examinations and won a \$400 Ontario government scholarship. Enrolled at U. of T. in a mathematics course, she occupies a room in the same residence of which her mother was head girl some years ago.

Cathie is interested in ballet and painting and spent some time in recent summers at the Doon School of Fine Arts. This past summer, though, she worked as a waitress at a golf club to help pay her college expenses.

Nancy Dobson

Nancy Dobson, 16, is the daughter of Lloyd B. Dobson, personnel officer at Dartmouth Marine Agency. Born in Halifax, she completed Grade 11 at Queen Elizabeth high school last June.

An honor student throughout her high school years, Nancy obtained a 92 per cent average and won a \$500 entrance scholarship to Dalhousie University, where she is now enrolled as an Arts student.

Nancy is interested in languages and spent last summer on an exchange visit with a French-speaking family in Quebec City. She would like to pursue a career in the diplomatic service after college graduation and help realize one of her ambitions to travel.

Nancy's other interests include badminton, music, reading and sewing. As well, during high school she was a member of the Hi-Y organization and a delegate to a United Nations Model Assembly.

John Harris

A maritimer by birth, 18 year-old John Harris received his early education in Dartmouth, N.S. When his father, G. C. Harris, administrative officer, staff requirements branch, was transferred to headquarters, John continued his education in Ottawa schools.

Graduating from Woodroffe High last June with a more than 80 per cent average in Grade 13 exams, John won a \$400 Ontario Scholarship and a \$100 McGill entrance scholarship in addition to his D.O.T. one.

In his final years at high school John excelled in sports, mainly track and field, and was chosen best all-round student in 1963-64. He spent one summer at the Ontario Athletic Leaders Camp at Lake Couchiching and was vice-president and president of his school's Key Club. John and other club members spent much of their free time working with retarded children.

Now enrolled in an Arts course at McGill University, John plans to major in mathematics and economics.



Philippe Demeules fastens a final piece of equipment on the model of the Canadian Coast Guard cutter "Spindrift". It is one of the three 70-foot cutters used by D.O.T. for search and rescue work.

Ship Model Maker Supreme

by Yvonne McWilliam

Almost every boy goes through the model-building stage, but few men, despite secret yearnings in many, ever get back to it.

Philippe Demeules is one who did. In 1952 he was employed as an equipment designer with Marine Industries Limited in Sorel, Quebec. He was 48 years old and had spent a good part of his life designing marine and related equipment, when he decided to make model ships for a living.

Today Mr. Demeules is 61 and has more than enough work to keep him busy. He refuses to expand. If he did, each model might not get his personal attention and, besides, a mound of paperwork has sealed off many a craftsman from his craft. Philippe Demeules could never be happy with that.

During the next 16 months Mr. Demeules will be working on D.O.T.'s exhibit for Expo '67—a radio-controlled demonstration of three 1/4" scale model ships in a 100-foot wide by 150-foot long pool. It will show an icebreaker assisting an ore carrier out of an ice jam. At the same time a lighthouse supply and buoy-laying vessel will leave for a lighthouse located on the other side of the pool to deliver cargo and lay a buoy.

The model icebreaker will be 7½ feet long, the ore carrier about 15½ feet and the buoy-laying vessel just over five feet. They will all be controlled by one operator sitting behind a push button, single console—a transmitter equipped with a separate set of keys for each vessel. Mr. Demeules will build the console as well as the model ships. Each ship will have a receiver

and will be built of fiber-glass with cast bronze and aluminum super-structure.

Philippe Demeules' first contract was also for D.O.T. He was commissioned to build a model of the then (1952) new icebreaker d'Iberville. About the same time he took on a job for the Royal Canadian Navy to make a model of the icebreaker Labrador (now owned and operated by the Canadian Coast Guard). These two contracts were his stepping stones and his craftsmanship soon became well known.

Possibly the only full-time, ship model maker in Canada, Mr. Demeules builds his models to perfect scale, and they are considered among the best on the continent. It is almost impossible, experts believe, to find any models with greater detail. They are commissioned mainly for educational or museum purposes.

D.O.T. is one of his biggest customers since the department hopes eventually to have a model of every Canadian Coast Guard vessel. Other customers include commercial shipping firms, ship yards and marine museums.

His is a one-man business. Each product receives almost microscopic examination before getting the Demeules' imprimatur. He gets help on a part time basis from his son, Yvon, a machine designer at a Sorel paper mill. Two other young craftsmen lend a hand in their spare hours with the pattern making and painting of the models. Although he has had opportunities to expand his home workshop into something more corporate, Mr. Demeules prefers to keep it the way it is. What

more could he want, he asks. He does the thing he likes best and has more than enough work ahead to keep him busy for the rest of his life. He doesn't advertise, the work seeks him out.

Born at St. Philippe, Laprairie, Quebec, Philippe Demeules was the son of a C.P.R. railroader and never saw the ocean or a large body of water until he was a man. As a youngster his choice of toys invariably tended to boats or things nautical. As well, he displayed a flair for art and, coupling the two, he wasn't very old when he was making his own toys—model ships.

In school he drew or lettered constantly. While still a student at St. John's College, St. John, Quebec, he was asked on several occasions to draft scrolls to present to visiting members of royalty—including the Prince of Wales and the Duke of Devonshire, who was Governor General of Canada at the time.

At 16 Philippe left school and began his career as a commercial artist. He worked for a few months, then enrolled at Ecole des Beaux Arts in Montreal when it opened in 1920. Eight months of formal art education was enough and he left to take a job as a sketch artist with a large commercial art firm. He worked on several accounts including Players Cigarettes Navy Cut.

Mr. Demeules crossed the border in 1923 to work in Bridgeport, Connecticut with a large advertising firm. There he concentrated on theatrical and mechanical displays, again specializing in the nautical. He returned to Canada five years later, rejoined his old firm, and stayed with them until the outbreak of World War II. Soon he was designing guns and ship machinery for Marine Industries Ltd. of Sorel, Quebec. After the war he used his skill in other design and decorating jobs for the firm. Then came 1952 and the opportunity to realize his life long ambition. The D.O.T. and RCN contracts for ship models came his way and he was on his way.

The work he is doing for the department's Expo exhibit is the only contract he can undertake for Canada's "big show". He began work on it early in 1965 and won't be finished until March 1967—six weeks before the Fair opens. During this time he will complete several other contracts. One for D.O.T. will be a one-twelfth scale model of the entire foredeck of an icebreaker with all lifting gear electrically operated from full size consoles. This will be used as a teaching aid for deck officers at the new Canadian Coast Guard College near Sydney, N.S.

The next time father sneaks off to the basement to check on Junior's train or aircraft models, let him go. He may just be lining up a second career. After all, Philippe Demeules started at 48.



The master model maker checks over blueprints of the models for D.O.T.'s Expo exhibit. The hulls of the models are on trestles in the middle of his basement workshop; the largest is the 15½ foot ore carrier, next the 7½ foot icebreaker.

According to Mr. Demeules, models of war ships are the most interesting and detailed to make. This one of the Royal Canadian Navy vessel, The Provider, is his pride and joy. Completed last spring, it is built to the scale of ⅛ inch to one foot and is accurate to the last "widge".



Une nouvelle conception

(suite de la page 9)

Grâce à cette méthode, M. Barrett espère exposer la véritable nature des changements qui s'opèrent au sein de la conception de la gestion au ministère des Transports, changements en vertu desquels le ministère des Transports sera un précurseur de l'évolution de la gestion au sein du fonctionnarisme. Il s'agira d'étudier à fond les principes de cette nouvelle conception de la gestion et d'en évaluer les répercussions afin que les membres des cadres supérieurs soient au courant de la ligne de conduite qui régira leur activité.

En se fondant sur les rapports statistiques et financiers pertinents les gestionnaires établissent leurs propres objectifs à long et à court terme, et ils ont la responsabilité d'établir leur budget en fonction de ces objectifs. La nouvelle conception en matière de gestion comportera un partage entièrement nouveau des responsabilités. Les fonctionnaires des bureaux extérieurs effectueront les opérations et auront toute l'autorité nécessaire pour prendre des décisions pratiques. Ainsi, le personnel du bureau central pourra consacrer plus de temps à l'établissement des lignes de conduite, à la formulation des objectifs du Ministère et à l'établissement de programmes à long terme en vue de les atteindre, à l'établissement de procédures concernant les normes et la vérification, à l'application des nouvelles techniques aux opérations du Ministère et à l'exécution de travaux du même genre qui lui permettra d'évoluer au rythme du monde moderne.

Avec ces objectifs en vue, il n'est pas étonnant que les journées d'étude consacrées à la nouvelle conception de la gestion approfondiront le fondement même de cette science. Voici les titres de certains travaux qui seront présentés: Notions de la gestion contemporaine; Étapes de la gestion; Rôle innovateur du gestionnaire; Centralisation ou décentralisation; Le rôle du personnel de direction par rapport au personnel d'exploitation dans une organisation décentralisée; Problèmes que pose la délégation des pouvoirs.

D'autre part, les communications ne porteront pas uniquement sur les principes théoriques de la gestion. M. G. F. Davidson, secrétaire du Conseil du Trésor, présentera un travail intitulé «Évolution des notions et des méthodes de gestion au sein de la fonction publique; tendances et perspectives». M. Ronald Ritchie, ancien directeur exécutif de la Commission d'enquête sur l'organisation du gouvernement, traitera pour sa part des «Recommandations faites par le rapport Glassco en matière de gestion». M. R. B. Bryce, sous-ministre des Finances, traitera de «Aspects financiers à considérer dans l'établissement par le gouvernement d'une ligne de conduite dans le domaine économique». Enfin, M. D. R. Yeomans, adjoint du secrétaire du Conseil du Trésor, étudiera «Le rôle du Conseil du Trésor».

L'orateur invité au banquet de clôture sera M. J. E. Hodgetts. Auteur bien connu faisant autorité dans le domaine de l'administration publique, le professeur Hodgetts était directeur du comité de rédaction de la Commission royale d'enquête sur l'organisa-

tion du gouvernement. Il a intitulé sa causerie «Les perspectives d'avenir de l'administration publique».

On étudiera de façon approfondie l'organisation de la gestion au sein du ministère des Transports. Le ministre traitera du rôle joué par le Ministère dans la société canadienne. M. D. G. Tilley, premier conseiller financier, et M. Eric Winsor, Directeur de l'exploitation des aéroports, exposeront les grandes lignes du nouveau système de gestion financière. M. Baldwin, sous-ministre, traitera des rapports entre le personnel de direction et le personnel d'exploitation en vertu du nouveau système. Il y aura également la présentation de plusieurs autres travaux concernant le ministère des Transports.

Plusieurs réunions seront consacrées à la présentation de rapports sur certaines expériences tentées dans ce domaine, notamment l'expérience tentée par les chemins de fer Nationaux du Canada dans le domaine de la décentralisation ainsi que la conception de la gestion qui existe au sein de la compagnie Dominion Electrohome. On étudiera également, en s'inspirant des dossiers de l'École d'administration de l'Université Harvard, les cas d'entreprises centralisées qui ont effectué une décentralisation complète de leur gestion.

En outre, on traitera des répercussions que pourrait avoir l'établissement du nouveau système sur les employés du Ministère. M. J. J. Carson, président de la Commission du service civil, traitera du nouveau rôle qui incombe à la Commission vis-à-vis les ministères de l'État et M. J. D. Love, secrétaire adjoint, Ligne de conduite relative au personnel, Conseil du Trésor, traitera des aspects de la gestion du personnel qui relèvent du Conseil du Trésor. M. W. A. MacPherson, Directeur général du personnel et M. J. I. Carmichael, Directeur des services de gestion, parleront du développement des services professionnels assurés aux employés dans les domaines de l'administration du personnel, des services de gestion et de la formation et du perfectionnement, afin d'aider les employés qui ont des problèmes dans ces domaines et qui doivent faire appel à ces services. La deuxième partie des journées d'étude sera surtout consacrée à l'étude des répercussions qu'aura le nouveau système sur les employés du ministère des Transports.

D'après les thèmes des journées d'étude, le but visé n'est pas d'enseigner aux participants quoi faire et ne pas faire; M. Barrett espère qu'il s'en dégagera de la réflexion plutôt que de l'érudition. Seulement le tiers des journées d'étude est consacré aux communications; les participants profiteront du reste du temps pour discuter et échanger des opinions.

Les thèmes ont été choisis de manière que le gestionnaire soit porté à considérer les lignes de conduite du Ministère en fonction du Conseil du Trésor, de la Commission du service civil et de l'ensemble de la fonction publique.

Ils ont été choisis en vue de favoriser la réflexion et la compréhension à une époque où le ministère des Transports prend une nouvelle orientation dans le domaine de la gestion, ce qui devrait se refléter sous peu à tous les échelons du Ministère.

From the Prophet . . .

by Vic Turner

There flourished in the land of Can, in the prov of Al, in the city of Ed, a diety called the Deeoty. Mighty in power was this Deeoty and its very name struck terror into the hearts of the wicked while those of pure heart held it in awe. For it had come to pass that the PM of Can had given Deeoty power over all the man-made birds and they that flew in them and they that pushed and pulled their controls and they that said the way to go and they that twisted wrenches upon the birds and they that operated in the code of Morse.

Such was the omnipotence of the Deeoty that they took the trackless air and filled it full of tracks and spokes saying, "Wither thou goest thou shalt go at the designated altitude according to thy magnetic track."

And the ruler of the Deeoty in the capital of Ott spake. "Verily I say unto you operators do not scrimp on maintenance or your certificate shall be lifted. Crewmen, obey the laws of the Deeoty if thou wouldst go thy three score years and ten. Heed these words or thy authorities shall be revoked and great shall be thy lamentations while banished to the land of East Misery."

And it came to pass in the town of Jon in the land of Beecee a certain band named students called upon the Deeoty saying, "Send us your servant that he may come and test us that we may get the coveted honor of the license private." And Peet of the Deeoty of Ed said, "Gird thyself for soon shall come my right hand man Jak to try thy metal."

And it came to pass that Jak arrived at Jon and put before the students the secret hyroglyphics of the meteorology and the numerology of the loading of the man-made birds and the mysteries of the flight theory and the strangeness of the magnetism of the navigation. Great were the cries of anguish for the band were wondrous in the air but slothful in attendance at the school of ground. "Woe is us," they cried. "We have been undone by that scoundrel of an instructor who made us fly so well in the man-made birds but did not give us the twist of arm to go to the school of ground. Woe is us."

And Jak spoke saying, "Thou are stupid churlish dolts who skip the school of ground lore and ignore the study at home. A pox on thee, thou art but goodtime Charlies. Thou hast flunked! Harken ye of the student band. Remove the lead and pick up thy burden of the matters aeronautical and I shall return in one moon to again administer the ordeal of the test of the facts of flight and verily thou hast better do better or thou shalt dwell in the land of the Student Pilot Permit forever.

And Jak climbed aboard his man-made bird with engines two and laying a finger aside of his nose he opened the taps and off the runway he rose.

The band named students met in their council chamber and salty tears of remorse and pity fell into the beverage foamy and the dullest lamented, "We have boobed. Too often have we frequented the spots of night instead of giving the books a hit. Too often have our posteriors been in the classroom and our minds in the tropopause. Let us heed the words of Jak and smite the books and pick up the pearls of wisdom of our friend and guide our wizened instructor."

And for thirty days they labored beating not the drums and cymbals but the book of ground up. They drank not of the mead but ate of the fruit of knowledge and as the new moon rose again they chanted, "Send us Jak, send us Jak."

And Peet got the word and sent Jak who applied the test and great was the rejoicing when all had passed and Jak said, "The Deeoty is thy shepherd thou shalt not prang. He maketh thee to fly by the Air Regulations. He leadeth thee by the Navigation Orders. He flyeth thee right. Yeah though ye fly through the valley of air in subsidence thou shalt be fore-warned. Thy rate-of-climb speaketh. Thy altimeter comforteth. Keep alert. The Deeoty inspecteth thy landing fields and thy bird and thou shalt have joy in them. Keep thy cockpit checked. Follow your Notams and Information Circulars all the days of thy life and the Canada Air Pilot and the Radio Aids to Navigation will lead thee safely home forever.

Reprinted from Canadian Wings.

Fairway Buoy Replaced



Gently does it, as a four ton buoy is hauled out of the water at Victoria, B.C. by the crew of the Canadian Coast Guard light-house and buoy tender CCGS "Estevan". The buoy, taken ashore for cleaning and repair work, is replaced by another at once. A season's growth of kelp and barnacles is amply evident.

There was a loud "chonk," the pitter-patter of feet and an uproar broke loose on the deck of the good ship Estevan.

The "chonk" came when an engine deckhand hit a chain slip with a sledge hammer. The pitter-patter was his rapid retreat from the 75 fathoms of chain with a four-ton block of concrete attached, which snaked from the deck into 45 fathoms of water.

NOT A RIPPLE

On a beautiful sunshiny September day, the Estevan carried out the replacement of Victoria's fairway buoy with scarcely a ripple in the strait. Many of the buoys on the west coast of Vancouver Island are serviced in deep swells and heavy tide.

First mate Monty Montgomery recalled the day a four-ton buoy anchor got out of hand and landed in the slot where he had been standing the minute before. "You learn to move quick," he said. "The anchor went through the cargo hatch."

AIR HORN

The new, bright, shiny buoy was lowered into the water and groaned mightily as the action triggered the air horn gear.

Then began a neat ballet as four crewmen and the second and third mates combined efforts with the winch men to hoist 75 fathoms of the old buoy's anchor chain and anchor to the surface, 12 feet at a time.

Snarls were handled cautiously. "They learn great respect for that chain," said the first mate.

SWAPPING BUOYS

The old buoy, smelly and loaded with kelp and barnacles, was barely on deck when the crew started scraping it while the ship entered harbor.

"We even managed to give you good weather," said Capt. James Thom as he climbed again, for the bridge. The operation had been completed in less than two hours and the ship was away again to swap more buoys, this time in the Fraser River.

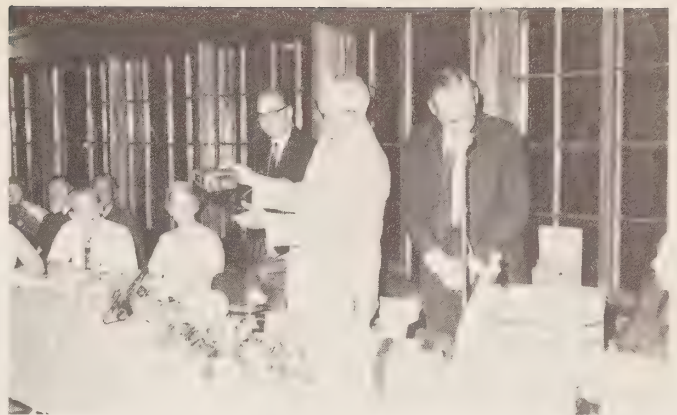
Reprinted from the Victoria Daily Colonist



Forty-five fathoms of heavy chain, by which a four ton block of concrete is attached to a buoy to act as anchor, must be hauled aboard ship when the buoy undergoes seasonal replacement. Here, a seaman aboard CCGS "Estevan" starts forming the incoming chain into a pile on the deck.



A. R. McCauley (standing right) and P. D. McTaggart-Cowan are amused by greeting card attached to retirement gift.



A. H. Wilson says "thank you" to friends and co-workers for gift of camera he received at his retirement.

Retirements

A. R. McCauley

A. R. McCauley, regional meteorologist at Vancouver, retired in August after 35 years of government service.

A native of Moose Jaw, Saskatchewan, Mr. McCauley graduated from the University of Saskatoon in 1928 and went on to the California Institute of Technology from which he received a Master of Science degree. In 1930 he joined the federal government's weather service and seven years later was assigned to Vancouver to establish a forecasting service. In 1948 he was appointed regional meteorologist and held that position until retirement.

Mr. McCauley was feted by his co-workers in the Vancouver region at a party at the Capilano Canyon Garden. It was a joint celebration, in honor of both Mr. McCauley and A. H. Wilson, and was attended by some 200 guests.

A. H. Wilson

A. H. Wilson, regional superintendent of airways at Vancouver, retired late in July after 20 years with the department.

Mr. Wilson, a well known personality in the aviation world, was part of a number of Canadian firsts. He came to Canada from England in 1923 after service with the Royal Air Force. He became a captain with B.C. Airways, the first company to provide scheduled service in Canada. Later he was an instructor with the B.C. Aero Club and in 1935 was the first civilian in Western Canada to obtain instrument rating.

During World War II Mr. Wilson was commanding officer at several RCAF Stations. In 1945 he joined D.O.T. as

district airways inspector. He was appointed regional superintendent of airways in 1955.

Mr. Wilson was co-guest-of-honor with Mr. McCauley at the retirement party held at Capilano Canyon Gardens.

Miss Therese Belanger

Miss Therese Belanger, secretary to the chief, St. Lawrence Ship Channel, retired recently after 21 years of government service.

Miss Belanger began her public service career with air services at Montreal in 1944. She transferred to the ship channel branch in 1954.

On the occasion of her retirement members of the ship channel staff presented her with a gift and best wishes for her retirement.

Alistair High

Alistair High, regional planning and co-ordinating officer, Montreal air services, retired in September.

Mr. High joined the department in 1948 and served with financial services at

Ottawa. In 1951 he was appointed to Montreal regional air services accounts and in 1961 joined the airport division as planning and co-ordinating officer.

At an informal get-together on September 1, Mr. High was honored by his co-workers. Regional Director Maurice Baribeau presented him with a gift and best wishes for happy days of retirement. Mrs. High received a bouquet of roses.

Duncan Oliver Mackenzie

After 26 years of departmental service, Radio Inspector Duncan Oliver Mackenzie retired early this past summer.

Mr. Mackenzie's radio career began in 1926 when he served on the old GTP steamships, Marconi-equipped vessels and later with CN Steamships. In 1939 he joined D.O.T. and was stationed at Carmi, Grand Forks, Cranbrook and Penticton, B.C. In 1959 he joined the staff of radio inspectors at Kelowna.

A retirement dinner was held at the Totem Inn, Peachland, B.C. in honor of Mr. Mackenzie.



Maurice Baribeau (right), regional director Montreal air services, gives Alistair High an assist in cutting his retirement cake.



H. L. Land, chief engineer, St. Lawrence Ship Channel, presents retirement gift to his secretary, Miss Therese Belanger.

Dateline—Across Canada

Dartmouth, N.S.—A Dartmouth high school graduate, Stephen Hiltz, stands unique among his classmates, having completed 12 years of schooling without missing a single day.

Stephen, son of Dartmouth Marine Agency's Stores Officer E. J. Hiltz, has won attendance prizes every year in school. His record has been termed "amazing" by a Department of Education official.

Stephen entered Dalhousie University this fall and plans to work towards a Bachelor of Commerce degree.

Vancouver, B.C.—The new CCGS Vancouver which, when fitted out late next year, will be the most modern weather and oceanographic vessel in the world, was launched in June. However, the launching was not exactly as planned.

The vessel took things into "her own hands" and launched herself 2½ minutes ahead of schedule.

It all came about like this. The ship, more than 5,000 deadweight tons, was poised on two grease-and-wax-slick launching skids. The sun was hot. A steel bolt sheared through. A roar went up from the crowd assembled for the official ceremonies. "There she goes." And go she did.

To quote a Vancouver newspaperman who covered the event, "Dignitaries were

caught with their launching speeches down."

Rev. E. R. Dingle of the Flying Angels Mission to Seamen said a quick prayer as the vessel slid by and the band, undaunted, swung into God Save The Queen.

Mr. David Wallace, general manager of Burrard Drydock, builders of the Vancouver, shouted, "Break the bottle. Break the bottle", while Mrs. Arthur Laing, the ship's sponsor, grabbed at the wildly dangling bottle of champagne and gallantly hurled it at the disappearing prow.

It was a hit, but not a break. Mr. Wallace retrieved the bottle, hurled with his right and scored a bulls eye.

And then the ceremonies got underway as the Vancouver, appearing a little proud of what she had accomplished, rode gracefully in the sea.

"She wanted to get on the job in a hurry," quipped Mr. Wallace. "We've had several ships that have refused to go, but this is the first premature launching in our 70 years of business."

Assistant Deputy Minister of Marine Gordon W. Stead accepted the vessel on behalf of the government.

She is 400 feet long, has a beam of 50 feet and a load draft of 17 feet and her range will be 8,400 miles at 14 knots. She will be the largest ship in the Canadian Coast Guard fleet.

Ottawa—One keen student writes us saying: "I am a grade eight student and I am learning all about Canadian history. We are learning about the early transportation like the steam boat the automobile and the train. I would like to know how long the train that goes from one end of Canada to the other. I would also like if possible some information and illustration about it."

Seems like rather a "long" order!

Ottawa—Richard M. Ross, 56, of Ottawa, has been appointed deputy emergency measures co-ordinator. He will assist co-ordinator D. G. Keddie.

A native of Westmount, Quebec, Mr. Ross came to Ottawa as a youth and received his education in local schools. He joined the Royal Canadian Naval Reserve in 1924 and later transferred to the Cameron Highlanders and was commissioned in 1932.

During the Second World War Mr. Ross served overseas with the Cameron Highlanders. He remained in the army until 1961 at which time he retired with the rank of lieutenant-colonel.

Prior to his recent Transport appointment Mr. Ross served as a training and exercises officer with the Emergency Supply Planning Branch of the Department of Defence Production.

Recent Suggestion Awards Winners

NAME	POSITION	LOCATION	AMOUNT
G. W. Elliott	radio operator	Coral Harbour, NWT	\$30
John Hanch	radio operator	Bull Harbour, B.C.	\$10
M. M. Howson	technician, electronics	Acton, Ontario	\$10
Robert Kelland	radio operator	Medicine Hat, Alta.	\$40

Cub to the cookhouse door—or, in this case, to the galley porthole.

This hungry young polar bear was photographed at Foxe Channel by Captain J. C. Smith, DEW Line area superintendent for D.O.T. Captain Smith was aboard the CCGS NARWHAL with the Foxe Basin resupply convoy bound for Hall Beach in the Eastern Arctic when crew members attracted the cub by throwing food scraps overboard.

The bear enjoyed all the goodies with the exception of a cigar butt. "He ate it," said Captain Smith, "and then had hiccups for half an hour."



Canadian Coast Guard ALBUM



CCGS STONETOWN, a Pacific Ocean weather ship based at the Department of Transport Victoria District Marine Agency, is a former Royal Canadian Navy frigate. Along with two similar vessels, she was acquired by the Department of Transport and converted to a weather ship in 1950. She occupies Ocean Station "Papa" in the Pacific Ocean, some 900 miles west of the British Columbia coast. She was built at Canadian Vickers Limited, Montreal.

CCGS STONETOWN

LENGTH: 283 feet.

BREADTH: 36 feet, 5 inches.

DRAFT: 13 feet, 6 inches.

POWER: Steam reciprocating; twin screw; 3,700 IHP.

GROSS TONNAGE: 1,883.

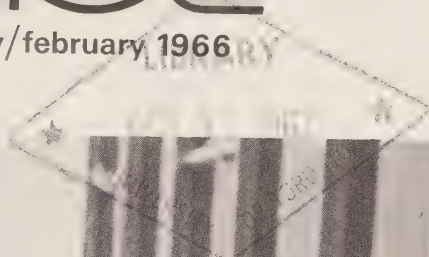
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COVER

On January 30 Ottawa was hit by the winter's heaviest snowfall—19 inches of the dry, drifting stuff in 24 hours. Our cover photo shows the main stairway leading to the tarmac at Ottawa Airport. In spite of the severe conditions they faced, airport maintenance staff managed to clear the runways so that scheduled service could resume early on the evening of the 31st.

EDITOR

Yvonne McWilliam

THE DOT is a Department of Transport staff magazine published under the authority of the Minister, Hon. J. W. Pickersgill, by the Information Services Division.

This edition pays tribute to several distinguished members of D.O.T. who are entering well-deserved retirement and, unfortunately, taking their long, valuable experience with them.

Such inevitable losses of experienced people point up the need to keep our roster of skilled and professional staff both to fill the "room at the top" as required and to maintain our enormous program of public service.

There are many career opportunities in technical fields ranging from coast guard through the weather services, air traffic control and telecommunications, to give a partial list.

If you have a young friend with matriculation standing who is thinking about a career, you could do him no better favor than to suggest he investigate the salaried training and satisfying employment which D.O.T. has to offer.

The Editor



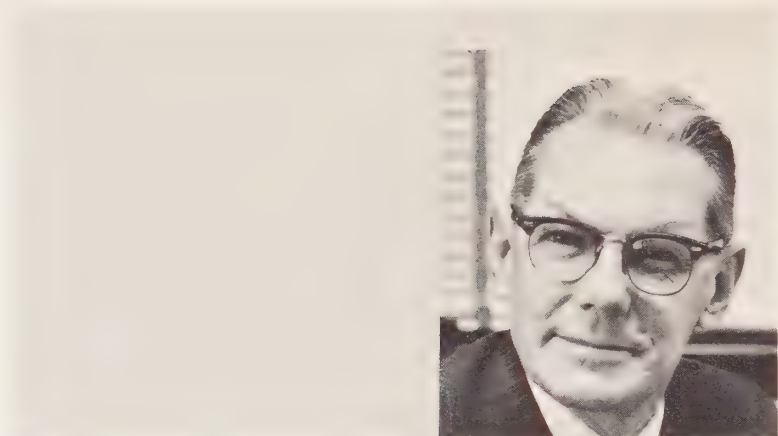
FROM THE DEPUTY MINISTER'S DESK

The process of learning never ends; it is constantly associated with the work that any person carries on. Without this stimulus life would be very dull. The challenge of change, whether associated with a new job or new circumstances in an existing position, requires new knowledge and new training.

To let you know how important we consider this, in January we completed a special full-time two-week training course for 65 of the most senior employees of the department, to improve their understanding of general principles of management and administration. We intend to repeat this in April for a similar group.

The need to improve and to provide training facilities is recognized at all levels of the department and we encourage employees to engage in whatever training will improve ability and competence. Not only do we value those who wish to do this on their own, but we try to provide within the department various types of specialized training. If you feel there is something lacking do not hesitate to let us know.

J. R. Baldwin



LE MOT DU SOUS-MINISTRE

L'acquisition de nouvelles connaissances ne connaît pas de fin; notre travail nous le fait découvrir davantage chaque jour. Or, sans ce stimulant, la vie serait bien monotone. Aussi faut-il acquérir de nouvelles connaissances et une formation plus poussée pour être au diapason des changements inhérents à l'affectation à un nouvel emploi ou découlant de nouvelles situations dans l'emploi actuel.

Pour vous démontrer l'importance que nous attachons à cette affirmation, nous avons organisé en janvier un cours spécial de formation d'une durée de deux semaines à l'intention de 65 hauts fonctionnaires du Ministère, en vue de les pénétrer davantage des principes généraux de gestion et d'administration. Nous songeons à organiser le même cours en avril à l'intention d'un groupe semblable.

A tous les échelons du Ministère, il est nécessaire que les fonctionnaires se perfectionnent et qu'ils disposent de moyens appropriés de formation. Nous les incitons à acquérir la formation qui leur permettra d'améliorer leurs aptitudes et leur compétence, soit de leur propre initiative, soit en bénéficiant de la formation spécialisée que nous tentons de leur fournir au sein du Ministère. Si vous constatez des lacunes à cet égard, n'hésitez pas à nous les faire connaître.

J. R. Baldwin

FLASHBACK:

1942 and the Alaska Highway

from the diary
of O. T. Howey



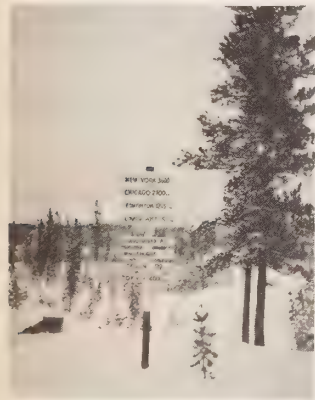
Some 23 years ago, in November 1942, six D.O.T.'ers in four half-ton pick-ups made the first civilian trip up the Alaska Highway from Edmonton to Whitehorse. It took them 11 days (70 hours of driving) to cover the 1500-odd miles. Scarcely a year before, most of the route had been but a casual assortment of trappers' trails travelled by dog team and an occasional pack horse.

The six men, Oliver Howey, Jim Connolly, Ted Argue, Gib Wall, Des Carty and Art Taylor, all members at that time of Edmonton region telecommunications, were delivering the Chevrolet pick-ups to range stations at Aishibik, Snag, Teslin and Smith River, where service trucks were needed for transportation of personnel and light materials.

The temporary Alaska Highway, or tote road as it was called, was built by U.S. Army engineers in only eight months. It was and

still is a monument to their industry and skill. (They continued to improve and maintain it until the end of the Second World War, when the Canadian government assumed responsibility).

The D.O.T. convoy was probably the first non-military group to use the whole road. When they began they didn't think the word pioneers applied. By the time they pulled into Whitehorse they weren't so sure. Before starting they were aware of two points where they could expect difficulties. The Peace River



Famous sign near Whitehorse.

bridge, beyond Dawson Creek, had been taken out by moving ice and the ice at Teslin Lake was considered unsafe, but as it turned out these places were passed easily compared to some of the hairpin curves, switch-backs and grades they encountered elsewhere.

The four trucks left Edmonton on the morning of November 23 in a light snowfall which gradually increased until at Clyde visibility was a matter of yards. Still they decided to push on to Athabasca where accommodation was better and the day's mileage would total a creditable 100 miles. The six were tired when they finally got to bed there. By nine the next morning after

having first awakened the town, they were off again. The D.O.T.'ers had managed to rouse the Chinese cafe-owner to serve breakfast at 7 a.m. The garage operator who stored the trucks overnight suffered a similar rousing.

November 24 was to prove one of the longest days of the trip. They were on the road about 15 hours to add 271 miles to their total—stopping, exhausted, at midnight.

High Prairie, for dinner and the night, had been the original objective. Once there, however, they were told chances of the ferry continuing to operate across the Big Smokey River, nearly 100 miles further north, were poor. Southbound U.S. Army drivers reported that the river was freezing rapidly and, while the ferry had run that day, it might not be able to continue much longer. A few hours delay could mean a complete hold-up or a long, tiring detour. So the six men agreed to carry on in hopes of getting over the Big Smokey first thing in the morning of the 25th.

The trip from High Prairie was treacherous. Heavy snow allowed the trucks to go only at a crawl and when they finally reached the river the ferry had made the last trip for the day 45 minutes earlier. Visions of relatively comfortable rooms at a Grande Prairie hotel were replaced by the reality of sleeping bags on the floor of the ferryman's shack.

The ferryman assured them that they would get across early the next morning. He then allocated "lying room" on the floor of what Oliver Howey described as the smallest shack of its kind. It contained, of course, a wood stove that seemingly burned out two and a half minutes after the travellers had bedded down. It was a good 20 degrees below zero. Some misguided "architect" had raised the floor about two feet off the the ground, allowing for tropic ventilation! In the morning a long and rather heated discussion took place as to whose job it was to get up and start the fire. Exasperated, the ferryman settled the discussion. As the smoke from the resulting explosion cleared, all hands arose with quickly summoned alacrity. The ferryman stood with a quart bottle marked "kerosene" in his hand.

The convoy couldn't get under way until some two or three hours had been devoted to chopping the ferry free from the imprisoning ice. Even then, the ferry had to be poled through ice and current to get across. The D.O.T.'ers most definitely worked their passage!

The next 28 miles into Grande Prairie made the first bit of real driving possible. They made Fort St. John by nightfall, and on the way passed a steady stream of great six-wheel army trucks



It took two or three hours to chop the ferry free from the ice before they could start.

loaded with a variety of equipment. As well, between Grande Prairie and Fort St. John they frequently had to do minor detours around long lines of gravel piles to avoid all kinds of road machines, whose operators chose to remain oblivious to traffic. Apparently a bulldozer operator is somewhat like a performer—the show must go on—and oncoming traffic can do anything it chooses to get out of the road just as long as it doesn't disturb the bulldozer.

The next morning the group was unable to get away from Fort St. John until nearly noon due to a flat tire, oil and gasoline requirements. The local garage, due to expanding business created by the highway, needed three times the staff and twice the space to service customers adequately.

The most hair-raising part of the trip was yet to be experienced during the 270-odd mile stretch from Fort St. John to Fort Nelson. The D.O.T. drivers learned on the 12-hour stretch to pay close attention and to obey explicitly all road signs. The worst hills and curves were well marked with speed limits given. The approach to the Sikanni Chief River, for example, informed all trucks to proceed no faster than five miles an hour in first gear. At that point the road turned more than 90 degrees to the left and dropped so suddenly that one had to be well advanced on the brow of the hill to see the bottom where everything disappeared into timber. A complete half circle, the curve's beginning and end were only 15 or 20 feet apart. From there the road dropped so sharply that, even in low gear, wheels skidded as they took another turn to the left and put the trucks directly onto a one-way bridge.

A temperamental air compressor engine delayed departure from Nelson on November 27, but by noon they were on their way. Once again the road plunged into low mountains. Twisting and turning, rising and falling, it searched out passes and followed river valleys. At Mile 116 it suddenly disappeared under two or three feet of broken ice, the result of an overflow backing up over 150 yards of the highway.

Large U.S. army trucks were attempting to cross by smashing their way through the ice and water. Like enraged bulls they roared over the short approach and plunged into the churning water up to the tops of their wheels. Careening crazily from side to side, one moment almost broadside to the road, the next coming within a hair's breadth of upsetting, their front wheels were thrown clear of the water to fall back crashing onto the rocks and ice below. Drivers of the big giants were hurled about in the cabs like small pieces of mechanism that had been jarred loose.

The D.O.T. convoy felt getting their comparatively small vehicles across was not too promising, but after waiting until the larger trucks had smashed most of the ice they decided to attempt the crossing with one. The opportunity of getting a tow was the best!

The D.O.T. truck stopped dead about half way across the obstacle but was freed by a mighty jerk from a heavy army truck. As soon as it was clear of the water it was on its way for Mile 165 before water freezing on the brake drums or other parts

could stop it. The other three trucks turned back and headed for a construction camp to have a late supper and spend the night.

Next morning an American army road crew was at the site blasting away ice to drain the water. By 3 p.m. on November 28, the water level had been lowered enough to allow the D.O.T. vehicles, but not without a tow, to cross and be on their way.

From here on the road narrowed through mountainous area and it was decided to restrict driving to daylight hours. The crew spent the nights at construction camps. By mid-afternoon of the 29th the three-truck convoy reached Smith River range site where one truck was to be left. The remaining two left early the following morning and by five o'clock that afternoon were in Watson Lake where they caught up with the vehicle which had left them at Macdonald Creek.

Plans for an early departure next morning were thwarted by fuel line trouble in one of the trucks but, nevertheless, they still made it to Teslin Lake by 9 p.m. that night, December 1st.

Crossing the ice of a small bay of Teslin Lake had for some time been the greatest obstacle of the entire route. Several convoys had had to either turn back or wait patiently for the water to freeze to a greater depth. Before the U.S. army had stepped in to control traffic over the ice, five trucks had plunged through into 12 or 15 feet of water, their positions being "buoyed" by five small spruce trees planted in the ice.

Fortunately, the day the D.O.T. convoy arrived permission had been granted to use the ice between 9 a.m. and 5 p.m., one truck at a time with a load limit of eight tons. Two soldiers, one on either side of the half-mile bay, were despatching alternately in such a way that only one was on the ice at any time. The large trucks co-operated with a will and their drivers interpreted literally the northern adage for crossing thin ice. "Keep the door open and drive like — — —."



Roadstop north of Watson Lake as army lorry rumbles by.

The D.O.T.'ers were consoled by the thought of the small trucks they were driving, feeling that if the larger ones could make it there was little doubt about their two-ton gross. Nevertheless, the one- and two-inch cracks crisscrossing the drive path were not reassuring.

From Teslin to Whitehorse, the final 230-mile stretch was one of the most level sections encountered. They averaged 30 miles an hour and frequently cruised at 40 and 50. At 2.30 p.m. December 3 the last two trucks were parked at Whitehorse airport, mission accomplished, and the drivers were homeward-bound by air to Edmonton.

More than 20 years later all six of these drivers are still accounted for. C. G. Connolly retired in 1964 from the Edmonton Region, P. A. Taylor is now a purchasing agent with the Department of Forestry while the rest are still with the department's telecommunications branch. D. G. Carty is now regional controller of telecommunications at Winnipeg, J. W. Wall is superintendent of emergency measures planning, O. T. Howey is electronics technician with radio communications engineering and A. G. E. Argue is superintendent, radio authorization and enforcement regulations.



Senior Management Seminar

The winter sports for which Mont Gabriel, near Montreal, is famous were left far in the lurch January 3-14 as 65 members of D.O.T.'s senior management met at the lodge to engage in a heavy round of lectures and seminars on plans for introducing a decentralized system of financial management and the latest in management concepts. A similar seminar is planned for April 11-22. Shown left to right are—seated, D. A. Lane, Ottawa; H. H. Bindon, Toronto; D. B. Kennery, Ottawa; F. W. Benum, Toronto; E. Winsor, Ottawa; D. A. H. Farmer, Ottawa; H. Gourdeau, Ottawa; Darell DeBow, Ottawa; Miss Shirley Lago, Ottawa; Don Black, Ottawa; Harvey Johnston, Ottawa; H. Thompson, Ottawa; E. Hickson, Ottawa; W. A. McPherson, Ottawa; G. C. Tilley, Ottawa; A. R. Haines, Ottawa;—econd row, W. H. S. Neales, Ottawa; R. B. Campbell, Ottawa; M. E. Louch, Ottawa; J. E. Devine, Ottawa; T. I. Nightingale, Ottawa; J. E. Smyth, Winnipeg; W. D. G. Stratton, Moncton; H. J. Williamson, Ottawa; N. Dreskin, Ottawa; T. G. How, Vancouver; I. K. Leslie, Charlottetown; J. E. Goulet, Montreal;

H. R. Kaatz, Winnipeg; M. Baribeau, Montreal; F. M. Weston, Dartmouth; G. M. Mulvihill, Ottawa;—third row, D. J. Hartt, Ottawa; A. E. Weichel, Toronto; L. T. Campbell, Toronto; C. H. Delisle, Montreal; G. G. McLeod, Ottawa; J. I. Carmichael, Ottawa; H. A. Vaughan, Moncton; R. W. Goodwin, Ottawa; W. L. Inglis, Winnipeg; T. H. Prescott, Moncton; I. A. Macaskill, Edmonton; P. A. Chouinard, Ottawa; H. A. Stevenson, Vancouver; E. O. Ormsby, Saint John; A. H. G. Storrs, Ottawa; J. M. Platt, Ottawa; R. L. Davies, Montreal;—back row, D. A. McDougal, Ottawa; D. G. Keddie, Ottawa; E. F. Porter, Ottawa; D. M. Ripley, Ottawa; J. A. L. nahan, Moncton; J. R. MacKay, Ottawa; J. N. Ballinger, Ottawa; R. R. Macgillivray, Ottawa; H. J. Taylor, Edmonton; H. M. Wilson, Toronto; T. M. McGrath, Ottawa; H. C. McCaully, Ottawa; D. H. Hemming, Ottawa; G. Sicotte, Ottawa; F. T. Hughes, Winnipeg; A. H. Taylor. Course-members not photographed are K. H. Ewing, Edmonton; R. A. Gould, Ottawa, and R. E. Harris, Toronto.

"BON VOYAGE"

J. ROY BAXTER

On October 28 Clarke Memorial R.A. Centre was the scene of a gala bon voyage buffet supper in honor of Assistant Deputy Minister J. Roy Baxter and Mrs. Baxter prior to their November departure for London, England.

Mr. Baxter left headquarters to take up his new duties as D.O.T. representative at Canada House in London, where he will keep abreast of the major developments in the field of transportation in Britain, particularly as they affect D.O.T.'s general operations and regulatory practices. The appointment came after a 35-year career in the government which he began as a clerk and rose to an assistant deputy minister.

More than 150 headquarters friends and colleagues attended the farewell party, during which D. A. MacPherson, director general of personnel, paid tribute to Mr. Baxter's service to the department since its creation in 1936. He commented, as well, that the choice of location for the evening's entertainment was appropriate since Mr.



Baxter was one of the founders of the R.A. Centre and a member of the R.A. Board of Directors for 25 years.

The Baxters received matched sets of luggage. A bouquet of roses for Mrs. Baxter, a hand-lettered scroll depicting

highlights of his career for Mr. Baxter and an elegant black broly (umbrella to those who are unaccustomed to the Englishman's terminology) completed the list of gifts presented on behalf of personnel and administration employees.

Courtesy In Correspondence

Courteous writing habits are high on the list of D.O.T. requirements for its personnel. The following paragraphs were taken from the Royal Bank of Canada Monthly Letter for October 1965.

Writing letters is a skill; writing courteous letters is a social art worth developing.

Courtesy means that you refuse a favor in so considerate a way as to keep a friend, and do not grant credit in so grudging a way as to kill all hope of future business.

Considerations of manner and demeanour cannot be dismissed as frivolous or unimportant. They are significant elements in the lives of everyone from a statesman engaging in international diplomacy to the husband and wife making a go of marriage. In government, our accomplishments are enhanced by our observance of decorum and manners.

How can we define good manners? To be well-mannered is to do the thing you should do although you are not obliged to do it. This means being considerate of others, taking no unfair advantage, avoiding personalities that hurt people, and never being intentionally impolite.

Manners are of more importance than laws. The law touches us only here and there and now and then; manners vex or please us, exalt or debase us, constantly.

Good manners include tact, the art of all arts. Tact means taking pains and some trouble to see that others are not neglected, and doing the kind thing in a pleasant way. Great leaders are tactful in dealing with people, taking many precautions which lesser men neglect.

When writing letters

Have you ever stopped to think how self-revealing your letters are? Socrates said to a young man who was introduced to him to have his capabilities tested: "Talk in order that I may see you." In their letters people reveal and picture themselves in all their individuality.

Much of business today is done by correspondence. We may close the biggest deal without meeting the person with whom we transact the business. We must read his letters carefully so as to get his point, and write our own letters carefully so as to convey our meaning.

More than that, we need to write letters of good will. It is courteous to make it evident to your correspondent that you are writing him cheerfully and not as a chore.

Congeniality makes an important contribution to your happiness, even if it is expressed in face of hostility. You belittle your dignity if you allow a discourteous correspondent to set the pattern for your reply. There is no surer sign of a great mind than that it refuses to notice annoying expressions and the cross-grained humours of fellow citizens and colleagues.

Nothing is so disarming to an angry opponent as composure. Dogs bark at the slightest stir, before they have seen whether it be caused by friend or foe, but man's reason gives him the chance to deliberate. Instead of dashing off an out-of-temper letter with its sarcastic phrases and blunt aggressiveness we can analyse the situation, take command of it, and avoid a shabby display of peevishness.

When a man loses his temper he also loses his sense of dignity, his common sense, and his feeling for justice. It is a good rule, when you are so exasperated that you simply must get something off your chest, to hold over your letter for a second look tomorrow.

Respect others and yourself

Tune in on people. One of the surest ways to win a man is to show respect for his knowledge and deference to his person.

Men are fighting a constant battle against oblivion, and do not like being taken for granted. The craving of people for personal recognition is a deep and fundamental human need. Your letters should be written so as to make your correspondent feel important and capable.

Courtesy demands, therefore, that you treat your correspondent's name and position and title with respect. Most people respect their names, and expect you to do so too. Your letter, though it be truthful, must not rub your correspondent the wrong way. Give him nourishment for his self-esteem.

It is well to keep in mind that the letter you write may be read by others than the man to whom you address it: his secretary, his assistant, the person who will have to deal directly with the matter about which you write, and the filing clerks. To humiliate your correspondent in the eyes of these people is to impart a grievous wound.

A good letter

There is general agreement that if a letter is worth writing it is worth writing well, and no excuse should be allowed to interfere. A firm may spend millions of dollars to advertise its products, only to have some untrained, uninterested or thoughtless clerk spoil the effect by writing an uninspired or shoddy letter.

To be good communication, your letter ought to have a tendency to benefit the reader; it should be written distinctly and clearly. Your words should be the most expressive that the language affords provided that they are generally understood.

But there is more to it than that. Good letters are not merely the written record of information we desire to reach someone else.

We are losing their greatest effectiveness unless we use them to influence people. Very few propositions are decided by pure logic, but involve the imagination and feelings.

Good composition in letter-writing does not mean using rhyme or alliteration, but the graceful expression of a creative spirit. It changes the writing of letters from a dull grind to an exciting exercise in which your mind gives life to your words.

When you write a letter you are in competition with many other writers for your correspondent's attention and interest. This is not a competition in which the winner is the man who writes most poetically, or most grammatically, or most fluently, or most ornately. It is one in which the prize goes to the person who can best guide and inform and persuade. To give information is one function of a letter. To persuade to some action or belief is another function. To combine these in friendly language requires the greatest skill and a warm heart.

The exchange of ideas

A sense of participation and sharing characterizes successful communication, and this is helped when you convey something of your feelings and motives.

The most important executive characteristic of which we are certain is the ability to communicate two ways—outward and inward. While writing in such a way as to give your reader the opportunity to apprehend your meaning readily and precisely, be sure to give him his turn to express his thoughts so that you understand them.

The letters exchanged between you and a correspondent are nothing more than a conversation between two people talking of their affairs. During these conversations by mail you will run into these situations: sometimes you are right; sometimes both are partly right; sometimes the other person is right. Because of these possibilities, you need to pay attention, not to listen by halves. What your correspondent is saying to you may be misguided, but it serves to bring your thinking into focus.

When a troublesome suggestion has been made, restate it clearly and simply for two reasons: to make sure that you are both writing about the same thing, and to make evident your sympathy and understanding.

In developing this written conversation it is important to be affable in phraseology and unvaryingly moderate. We all know people who are handicapped by the fact that that even when their points are valid they present them with such screechiness as to make us back away.

If someone has difficulty in taking in what you have written, think first whether what you wrote was as clear as you could have made it. The fault may be in yourself, and to change a fault in oneself is much easier than to change the intellectual capacity of another.

Always leave a way of escape open to your correspondent. There is much to be said for the old Chinese doctrine of "face-saving".

Constructive and positive

It is never very satisfactory merely to clear your correspondent's mind of error; it is equally necessary to set it thinking correctly. Here is another area where your personal interest counts. You can dip a thousand pens into a thousand ink-pots without moving the mind of your correspondent an inch, but if you pluck a phrase of interest to him from the activity of your mind, you have him in the hollow of your hand.

Charming ways are quick winners. These are your expression of consideration and goodwill. Far from being evidence of cowardice, intelligent compromise is often the essence of courageous wisdom. When you yield on small points which are of concern to your correspondent, then out of sheer chivalry he is likely to give in to you on points which are vital to your case.

Next on the list, or perhaps it should be first, your correspondent requires that your reply be prompt. People may differ about the form a letter should take, how lengthy it should be, and many other points, but no one can successfully argue against the need for promptness in writing.

Some offices have the rule that all letters must be acknowledged immediately, even though action on them may be delayed. This courteous gesture serves to assure the reader that his letter has been received and will be given full attention.

Complaint letters

There is no more testing exercise in business than the handling of complaint letters. Do not do it grudgingly.

A letter of complaint is advance warning of a possible rupture with your correspondent. A most effective tactic is to treat it as a constructive suggestion about how to improve your service. Tell your correspondent he has done you a good turn. A quite moderate degree of conciliatory behaviour will placate your correspondent and win him over to the adjustment you suggest.

Above all, if you are in the wrong, admit it quickly and wholeheartedly. Instead of trying out an alibi, or working around to your confession by degrees come right out and say "You are entirely correct" or "You are quite right to complain". One of Confucius' most famous sayings is that "a man who has made a mistake and doesn't correct it is making another mistake".

Your letter of apology for a mistake need not be tear-stained, but it should be sincere and should evidence your integrity and chivalry. As Princess Victoria wrote in her diary: "People will readily forget an insult or an injury when others own their fault and express sorrow or regret at what they have done." The letter of apology should be signed by an officer of importance in your organization. This demonstrates to the man with a grievance that he is someone of account.

We are not machines

In any discussion of letter-writing, someone is sure to bring up the question of the modern way of doing things. They deny the fact that communication between people is not a variation of communication between computers.

Letter-writing demands that we write as if we were talking with one of our peers. If we must choose between discourteous abruptness and the snuffy and old-fashioned manners of courtesy, business will be the better and human relations will be happier if we lean toward the latter. Many schools have most lamentably neglected to provide pupils with alternative courtesy phrases to use instead of those which are condemned.

The greatest social asset that a man or woman can have is charm, and charm cannot exist without good manners. This does not mean slavishly following some rules, but using habitually manners polished by the continuous practice of kind impulses.

Courtesy is far and away the most effective quality to lift you above the crowd. It makes you treat every man with such consideration that his memory of you will be pleasant.

Eight Well-Known D.O.T'ers Retire

MISS LILLIAN WALTERS, with nearly half a century of government service behind her, retired from D.O.T. late in October. A native of Ottawa, Miss Walters plans to remain in the city.

Her lengthy government career began in 1918 when she qualified as a typist with the former Department of Railways and Lands. In 1929 she was promoted to a Typist 2. In 1936, when the Department of Transport was created, Miss Walters became a member of the Law Branch. In 1948 she became a Clerk 3 and five years later a Clerk 4, the position she held at retirement.

During the days of retirement that lie ahead, Miss Walters will have little difficulty keeping busy. She enjoys reading, art and playing the piano, as well as cooking and making millinery.

On her final day at the office friends and coworkers from throughout the department stopped by to wish her well. R. R. Macgillivray, director of marine regulations, until recently an assistant counsel in the legal branch, presented a watch to Miss Walters on behalf of her coworkers.



Left to right—G. Sicotte, assistant deputy minister general; J. Roy Baxter, now D.O.T. representative in London England; Miss Walters; R. R. Macgillivray, director of marine regulations.



Left to right—R. R. Macgillivray, Mr. Cumyn's successor; G. W. Stead, assistant deputy minister, marine; Mrs. and Mr. Cumyn; J. R. Baldwin, deputy minister; H. O. Buchanan, controller, steamship inspection.

ALAN CUMYN—After 26 years with the department Alan Cumyn, director of marine regulations, retired in October.

Mr. Cumyn was born in Silio, Mexico, of Scottish parents. He was educated in Victoria, B.C. and served his apprenticeship with Yarrows Ltd. at Esquimalt, B.C. During World War I he served overseas with the Royal Flying Corps. Prior to joining the government in 1939 Mr. Cumyn served throughout most of his shipping career as chief engineer with the Imperial Oil Company ocean fleet. He holds a British Ministry of Transport extra first class certificate of competency in steam and diesel engines.

Mr. Cumyn joined D.O.T.'s steamship inspection service in 1939 and was stationed at Fort William, Ont., and Saint John, N.B. before coming to Ottawa in 1950. He was appointed director of that branch in 1957.

On the occasion of his retirement a banquet was held in his honor and Deputy Minister J. R. Baldwin presented him with a radio on behalf of friends and colleagues.



R. W. Goodwin, T. C. Wheeler, G. A. Scott, A. de Niverville, Mrs. and Mr. Blondeau, J. Chadborn, H. J. Williamson and M. Baribeau.

J. LEON BLONDEAU, regional director of air services at Montreal has retired after nearly 30 years with the department.

Mr. Blondeau's association with aviation goes back even further, to 1927 when he took a pilot's course at Montreal and attempted his first solo and landing after only an hour and 45 minutes of dual instruction. He obtained his license in 1928.

In 1929 Mr. Blondeau founded the Société d'Aviation de Québec Inc. and

acted as pilot and secretary-treasurer until 1933. The company operated from the St. Louis Airport at Quebec.

With the creation of the federal Department of Transport in October, 1936, he joined as assistant inspector, civil aviation. Five years later he became district inspector of airways. Subsequently he was promoted to district superintendent of air regulations and, in October 1953, was appointed regional director of air services for

Montreal Region.

On the occasion of his retirement a buffet supper attended by some 120 people was held at Montreal International Airport. The program included remarks by Assistant Deputy Minister, Air, G. A. Scott and T. C. Wheeler, long-time friend and associate of the guest-of-honor and a pioneer in Canadian aviation. Mr. Blondeau was presented with a stereo-phonograph.

GEORGE W. SMITH, formerly director of air services construction, engineering and architectural branch, retired at the end of December. His engineering career in the federal civil service dates back to 1933.

Mr. Smith was born in Elmira, Ont. and spent most of his early life in Toronto. He graduated as a civil engineer from Toronto University in 1923 and then worked with the engineering firm of Frank Barber and Associates, Toronto and with Orville Rolfson in Windsor, Ontario.

He later joined the firm of James, Proctor and Redfern, and in 1925 went to South America, on loan to the Largo Petroleum Company, to carry out a survey of Lake Maracaibo as a preliminary part of the development of Venezuela's oil resources.

The following year he returned to Toronto. In 1933 he was engaged in airport construction on projects being carried out by the Department of National Defence.

He became district airways engineer at Kapuskasing, Ontario, for the Department of Transport in 1936. Later he worked in the same capacity in North Bay, and at Hamilton, primarily on construction of British Commonwealth Air Training Plan airports. In 1949 he came to Ottawa as



Assistant Deputy Minister, Air, G. A. Scott (left) admires Mrs. Smith's bouquet of roses while Mr. Smith looks on.

assistant to the superintendent of construction. Seven years later he was promoted to chief engineer, airport development, and in September, 1962 was named director of the construction branch, now known as the

construction engineering and architectural branch.

Mr. Smith is a member of the Professional Engineers of Ontario and of the Engineering Institute of Canada.

W. H. HEATH, officer in charge of Gander Aerodrome Station, retired on September 29 after a lengthy career in telecommunications.

Mr. Heath was honored by more than 200 friends and coworkers at a reception at the Newfoundland Airport Club. J. A. Lenahan, regional director of air services at Moncton, presented him with a set of luggage and a sum of money after tracing the events of his career connected with the development of aeronautical telecommunications in Newfoundland from the 1937 proving flight days at Botwood to the present. A bouquet of flowers was presented to Mrs. Heath.



Regional Director J. A. Lenahan (right) congratulates Mr. Heath on his retirement.

A. E. PHILPOTT, inspector of airworthiness at Winnipeg, retired in October after 17 years with the department.

A native of Lower Fort Garry, Manitoba, Mr. Philpott joined D.O.T. in 1948 as an

aircraft maintenance foreman after many years of experience in the commercial aircraft industry. He had been with Canadian Airways as an aircraft maintenance engineer during the pioneering days of

bush flying in Western Canada, and later joined Standard Aero Engine in Winnipeg as shop foreman.

In 1955 Mr. Philpott was appointed an inspector of airworthiness.



Director of the Meteorological Branch J. R. H. Noble (centre) presents a skill saw to Mr. Humphrey. Mrs. Humphrey is seated at left.

Over 70 meteorological branch coworkers of BLAKE HUMPHREY, together with representatives of private communications agencies, gathered on December 2 to wish him well at a retirement luncheon. Mr. Humphrey retired after 35 years of government service, 28 of which were spent with the met branch.

Mr. Humphrey began his met career as a teletypist in Lethbridge, Alberta and was appointed district teletypist supervisor in 1941. The increasing importance of Edmonton as a communications centre led to his transfer there in 1946. He was responsible for field administration of meteorological communications in Western Canada and worked closely with Canadian and American military personnel.

In 1952 Mr. Humphrey was transferred to Toronto headquarters as divisional supervisor (Weatherfax) of the national facsimile system used to transmit weather information in chart form to weather offices across Canada and to ships at sea.

At the luncheon the guest of honor was presented with a slide projector and screen and a skill saw. F. W. Benum, chief, forecast division, was the master of ceremonies and J. R. Noble, director, presented the gifts. The picture shows Mrs. Humphrey, left, Mr. Noble and Mr. Humphrey.

GEORGE WELLS, superintendent of radio aids, retired early in December. He had spent 27 years with the telecommunications branch, starting out as a radio operator on a lightship.

Born in London, England, George Wells first became interested in radio at school. In 1917 he obtained a British certificate of proficiency in radio. He spent the next 10 years with the Marconi Company, serving at sea. In 1924 he gave up the sea and took a position with a London firm. After four years he came to Canada, to Saint John, N.B. He married and spent two or three years managing a family printing business in Saint John. In 1935 he qualified for a Canadian certificate and joined D.O.T. as a radio operator on the Lightship Lurcher, followed by service as officer-in-charge at Cape Hopes Advance.



Left to right—E. F. Porter, chief, maintenance and operations; Miss A. M. Larock, secretary to C.M.O.; Mr. and Mrs. Wells; F. G. Nixon, director of telecommunications and electronics.

At the end of the Second War he went to Beaconsfield, Quebec as a technician and in 1948 transferred to headquarters as an assistant to the head of the marine radio section. Subsequently he moved over to the maintenance and operations division of the branch and later became superintendent of radio aids.

On the occasion of Mr. Wells' retirement friends and coworkers gathered to honor him. E. F. Porter, chief, maintenance and operations, presented him with a 90 watt CW transmitter as a farewell gift. Mr. and Mrs. Wells have bought a new home in Salt Spring Islands near Victoria and left Ottawa early in the new year to take up residence there.



Left to right—J. W. McClure, H. J. Taylor, Mr. and Mrs. Sigsworth, G. E. McDowell and W. J. Watts.

TOM P. SIGSWORTH, unit chief of Calgary terminal control, retired late in December after 25 years of government service.

Born in 1899 at Durham, England, Mr. Sigsworth came to Canada with his family before the first World War. He served with the Royal Canadian Engineers from 1917 to 1919. In 1925 he took up residence in

Saskatoon, Sask. and was one of the ten people who organized the Saskatoon Flying Club. He received his private pilot's license in 1928 and his commercial license in 1929. He still holds a valid private pilot's license.

Mr. Sigsworth joined the air traffic control service at its beginning in 1940

and after training became chief controller at Calgary. In 1944 he joined the RCAF and after the war's end returned to Calgary as chief controller.

A buffet supper was held in Mr. Sigsworth's honor and he was presented with a transistor T.V. and other gifts from friends and colleagues in Calgary and Edmonton.

First Merit Awards Made To Government Employees

The first merit awards, under the revised Incentive Award Plan for Public Servants, were made in the fall to five men who made contributions of unusual merit to the operations of the public service.

Three of the recipients, T. E. Brown, J. R. Killick and A. E. Johnston, are employees of the Department of Defence Production. The others, T. H. Kihl and E. R. Mitchell, are Mines and Technical Surveys employees.

As announced in March, 1965 the merit award program, provides for payment to employees for job performance of an exceptional character beyond what the job usually requires. The main object of the award is to provide a means of recognizing exceptionally good work when other means of recognition are not available.

Awards up to \$1,000 in cash, along with a citation, are granted.

Although none of the first five recipients were Transport employees, it is felt that D.O.T.'ers would be interested in reading accounts of the work which qualified them for merit awards.

MR. BROWN, deputy comptroller of Defence Production, received his award for designing and writing up specifications for a course in "Management Accounting for Small Business" which was used by the vocational training branch of the Department of Labour to assist owner-management of small businesses in the financial management of their affairs. Mr. Brown applied skill and ability in developing a new approach to the teaching of management accounting and his efforts are expected to result in an overall economic improvement. The course is also being used as a model for other courses, such as the Farm Development Programme. It is estimated that over 6,000 businessmen have taken the course to date.

MR. J. R. KILLICK, Ottawa, and MR. A. E. JOHNSTON, now stationed at Dayton, Ohio, are both defence production officers, who shared an award for their diligent and persistent efforts in selling Canadian-made air navigational equipment to the American air force. In addition to paving the way for direct sales amounting to over \$60 million, over a three-year period, this extremely efficient team provided a breakthrough in export sales for the Canadian electronics industry and has assisted in providing easier acceptance of other Canadian products on the export market by the United States and other foreign governments.

MR. T. H. KIHL, chief of the aeronautical charts section of Mines and Technical Surveys, was instrumental in effecting a change which simplified communication between air traffic controllers at airports and civilian and military aircraft of both Canada and the United States. By urging the use of Canadian designed and produced instrument approach and en route charts as standard for both countries, he not only provided a change which was beneficial to Canadian and American aviation, but also enabled a saving of some \$42,000 in public funds required in producing charts for the R.C.A.F.

MR. E. R. MITCHELL, head of the combustion engineering section of Mines and Technical Surveys, received an award for the energy and inventiveness which he applied to the production of developments in the field of combustion science, and the application of these developments which did much to maintain badly-needed markets for Eastern Canadian coal at a critical period in the history of the industry. Novel

grate designs for boilers, which were among these developments, have not only given additional employment to foundries, but have earned substantial savings for the Federal Department of Public Works. Mr. Mitchell is considered to be an expert in the solid fuel field and acts as consultant to the Dominion Coal Board, National Research Council and the Nova Scotia Technical College in Halifax.

The presentation of Merit Award Certificates and accompanying cheques varying from \$1,000 to \$500, was made by Miss Ruth E. Addison, chairman of the Incentive Award Board and Civil Service Commissioner; Mr. G. W. Hunter, Deputy Minister of Defence Production; and Dr. J. M. Harrison, Assistant Deputy Minister (Research) of the Department of Mines and Technical Surveys.

Recent Suggestion Award Winners in D.O.T.

J. J. Kinisky, a meteorological technician at Edmonton, received a \$50 award for suggesting that a particular make of photocopying machine be modified to save in consumption of ammonia when it is not in use.

Bull Harbour, B.C. radio operator, P. W. Copemen, made a suggestion that earned him \$40. He thought D.O.T. marine radio stations on the Atlantic and Pacific coasts should be encouraged to solicit synoptic weather observations from ships at sea. He felt that such additional weather reports would be of value to the meteorological branch.

Winners of awards valued at \$30 or less are:

NAME	POSITION	LOCATION	AMOUNT
H. Bryan	radio operator	Brochet, Man.	\$10
J. L. DesBiens	radio operator	Beaumont, Que.	\$10
I. L. Green	radio operator	Comox, B.C.	\$15
G. W. Illsley	electrician	Brochet, Man.	\$10
A. R. Johnson	radio inspector	Ottawa, Ont.	\$20
Jacob Kopetski	heavy equipment operator	London, Ont.	\$15
Mrs. J. V. Lemare	clerk	Edmonton, Alta.	\$15
P. E. Phillips	equipment operator	Sandspit, B.C.	\$10
S. J. Sillett	radio operator	Vancouver, B.C.	\$30
W. J. Smith	technician, electronics	Saskatoon, Sask.	\$30
Jack E. Wilton	technician	Vancouver, B.C.	\$20
J. H. Whiteside	radio operator	Bull Harbour, B.C.	\$30
M. G. Jeffries	radio operator	Ashcroft, B.C.	\$10
L. W. Taylor	air traffic controller	Halifax, N.S.	\$10



Record-Breaking Job In High Arctic

C.C.G.S. John Cabot

Ottawa—The Canadian Coast Guard ice-breaking cable ship “John Cabot” and the heavy icebreaker CCGS “d’Iberville” made a frigid trip into the uppermost reaches of Baffin Bay in November where the Cabot successfully carried out a cable repair job. With the two ships was the United States Coast Guard icebreaker “Westwind”, which, along with the d’Iberville, provided football style “interference” for the “John Cabot”, keeping fast-thickening ice floes away from her bows while the crew grappled for a broken communications cable and did the necessary repairs.

Capt. George S. Burdock, veteran Newfoundland master of the “John Cabot”, said the undertaking set a record in late season Arctic operations. “We had temperatures down to 10 below zero, though fortunately on the day we finally hauled up the cable the temperature had gone up to 22 degrees.”

Heavy ice, swept by high winds and current, provided a major problem. The cable ship had first hauled up an end of the broken cable on November 5, when it had arrived at the scene alone.

“We placed buoys on the cable ends, but the ice tore them loose.”

It became apparent that, despite being a full icebreaker, the “John Cabot” would have to have assistance. The Canadian Coast Guard icebreaker “d’Iberville”, commanded by Capt. Wilfrid Dufour, of Quebec, and the U.S. icebreaker “Westwind” went north and, because of the extremely cold weather and rapid ice formation, the “John Cabot” moved to a port in southwestern Greenland until their arrival.

The ships returned to the point of the cable break, southwest of Thule, Greenland, in Baffin Bay. With the other ships keeping her cable-laying bows relatively free of heavy, grinding ice floes, the “John Cabot” quickly picked up the severed cable ends and the line was repaired and dropped back to the sea bed. The task was accomplished in less than 12 hours, most of the work being done under the glare of floodlights that counteracted the almost round-the-clock darkness of Arctic winter.

The masters of the three ships lost no time in heading southward, for by that time there was about 90 percent coverage of ice in the upper reaches of Baffin Bay. By staying close to the Greenland side of the bay, they were able to steam without trouble. Three times, while in the northern part of the bay, the crew saw Polar bears on the ice.

Twice during the northern trip, Capt. Burdock said, hurricane force winds were weathered. On the second occasion, the ships were pounded by gales of up to 90 miles an hour in Davis Strait.

Capt. Burdock said his ship, which was just completed last spring, had performed exceedingly well. It was the vessel’s second trip into the same area. In August, just after the vessel had arrived for the first time at her home port of St. John’s Newfoundland, and was about to commence her sea trials, she was despatched north to look after a cable break. Instead of “trials” she was faced with a real duty assignment, in which she proved up to the department’s expectations.

Captain Lloyd Logan, 46, was appointed superintendent of flight operations in November.

A native of Ottawa, Captain Logan received his primary and secondary school education in local schools. He began his government service in 1936 as a clerk in the Secretary of State department and at the outbreak of the Second World War joined the R.C.A.F. He went overseas as a pilot with the 405 Pathfinder Squadron in 1942 and the following year was shot down over Germany and held a prisoner of war. He subsequently escaped, made his way back to Canada via Spain and England, returned to his squadron and was again shot down and recaptured. During his war service Captain Logan was associated with both the French and Dutch undergrounds. Discharged with the rank of Squadron Leader at the war’s end, he was awarded both the Distinguished Flying Cross and the French Croix de Guerre with Silver Star for his services.

Captain Logan resumed his government career in 1946 as civil aviation inspector with the Department of Transport. In 1955 he joined the department’s flight operations division as an executive pilot.

Captain Logan, who resides a few miles outside Ottawa at North Gower, Ontario, is married and the father of three children.

Canadian Coast Guard ALBUM



CCGS SIR JAMES DOUGLAS, a lighthouse supply and buoy vessel, based at the Department of Transport District Marine Agency at Victoria, B.C. She was completed in November, 1956 at the yard of Burrard Dry Dock, North Vancouver, B.C.

CCGS SIR JAMES DOUGLAS

LENGTH: 150 feet.

BREADTH: 30 feet.

DRAFT: 10 feet, 4½ inches.

POWER: Diesel, 1,140 SHP. Two Crossley engines each developing 570 SHP. Twin screw.

GROSS TONNAGE: 564.

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INTERNATIONAL YACHTING

the
dot

march/april 1966

- BACK UNDER SAIL
- NEW FORECASTING AID





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COVER

The Bluenose II enroute to the West Indies from Nova Scotia in January. See story "Back Under Sail" on page 4.

Editor Yvonne McWilliam

Rédacteur français Edouard Deslauriers

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ROGER DUHAMEL F.R.S.C., QUEEN'S PRINTER AND
CONTROLLER OF STATIONERY, OTTAWA, 1966

The DOT has decided to take a fundamental idea from group dynamics theory—participation—and offer its 14,000-odd readers a chance to become writers or idea collectors.

We are asking you to prod your memories for any Centennial-type of story which you, relatives or friends might have been connected with or have knowledge of. It might be about marine matters—a rescue, on the job experiences or anecdotes, new construction methods which set a pattern and so on. In air services it could concern inauguration of certain new equipment and its implications, particularly trying construction jobs or like things.

The department itself has decided to publish two historical works as a centennial project—about Canada's marine and air services—and has commissioned two well-qualified men to do the job.

J. R. K. Main, who will write the air services history, is a former director of civil aviation for the department and is widely-known in Canadian aviation circles. T. E. Appleton, a member of the marine operations branch, has an association with the sea that goes back many years through Royal Navy and Royal Canadian Navy service to merchant marine service beginning in 1929.

Suggestions from employees of the department would be most helpful in adding vignettes to the official histories being written by these men, and could be compiled and published as a series in the DOT as centennial approaches and during 1967 itself.

Let us hear from you.

The Editor

Le DOT fait appel à la collaboration de ses quelque 14,000 lecteurs. On est en quête de rédacteurs ou du moins de gens qui seraient en mesure de nous suggérer ou de nous soumettre des sujets ayant pour thème le Centenaire de la Confédération.

Il s'agit de se creuser les méninges pour dénicher des faits et gestes qui pourraient faire l'objet de récits intéressants.

Il pourrait s'agir de sujets touchant la marine, comme, par exemple, un sauvetage, une décision historique, de nouvelles méthodes de construction qui font époque. Dans le domaine des services de l'air, il pourrait s'agir de l'adoption d'un nouvel équipement et ses implications ou d'un projet de construction particulièrement difficile à réaliser.

Le ministère, de son côté, a décidé de publier deux œuvres historiques comme projet du centenaire. L'une porte sur la marine canadienne et l'autre sur les services de l'air. A cette fin, le ministère a retenu les services de deux personnages hautement qualifiés pour remplir ce mandat.

M. J. K. Main, qui fera l'historique des services de l'air, est un ancien directeur de l'aviation civile au ministère des Transports et est avantageusement connu dans les milieux de l'aviation canadienne. M. T. E. Appleton, attaché à la direction des opérations de la marine, est mêlé de près aux choses de la marine depuis 1929.

Des suggestions des employés nous aideraient à préparer une série d'articles qu'on pourrait publier dans le DOT à l'approche du centenaire et durant l'année 1967.

On attend de vos nouvelles.

La rédaction

Appointed Director of Transportation Policy and Research

Ray R. Cope, 35, has been appointed director of transportation policy and research for the department, effective April 1. In this newly-created position Mr. Cope will advise on policy development in the various transportation fields, land, sea and air. The branch will be a focal point for federal transportation research work.

Since 1964 Mr. Cope has been on loan to the department from the Canadian National Railways and has occupied the post of director, railway and highway branch. He will continue to be responsible for policy and research matters in that area.

A native of Vancouver, B.C., Mr. Cope graduated from the University of British Columbia in 1953 with a Bachelor of Science degree in mechanical engineering. He has taken post graduate studies in economics at McGill University. From 1953 to 1964 he was with the Canadian National Railways in various positions in the research and development area and in their hotel department.

Mr. Cope is president of the Canadian Transportation Research Forum and a member of the Engineering Institute of Canada. He is married and has two children.



Tradex Investment Fund Now Available to DOT Employees

Five years ago employees of the Departments of External Affairs and Trade & Commerce organized a fund to provide for investment by their foreign service personnel. Known as the Tradex Investment Fund Limited, it was incorporated by Letters Patent in January, 1960. Because of the advantages offered by Tradex it was decided to extend admissibility to all members of the two departments who are continuing civil servants.

Subsequently, requests were received from members of other departments and eligibility to purchase Tradex shares was extended to employees of the departments of Agriculture, Defence Production, Citizenship and Immigration, National Health & Welfare, Finance, Industry, Justice, Secretary of State and Dominion Bureau of Statistics.

As a result of requests from some D.O.T. personnel, the Board of Directors of Tradex agreed to broaden eligibility to include them provided the department concurred.

Deputy Minister Baldwin has given approval for D.O.T.'ers to be informed of their eligibility to participate in this mutual investment fund if they so desire. Participation is, of course, the personal decision of each employee.

To briefly acquaint readers with Tradex mutual investment fund the main features it offers include:

1. No "loading" charges. Tradex employs no salesmen and shares are purchased directly from the company, therefore the cost of commissions is eliminated.
2. No directors' fees are paid since the directors are civil servants who donate their services.
3. The minimum monthly subscription is fixed at \$10 and no down payment is required other than a five dollar registration fee. Provision is also made for lump sum purchases.

Other points of interest are that investment is in the hands of professional investment counsel and that the Royal Trust Company is responsible for safekeeping of assets and accounting.

D.O.T. employees interested in finding out more about the plan should write to:

**Tradex Investment Fund Limited,
76 Metcalfe St.,
Ottawa 4, Ont.**

Back Under Sail

By Ken Parks

*"I must go down to the seas again
to the lonely sea and the sky
And all I ask is a tall ship
and a star to steer her by—"*

It was January 10, a dull and miserable day of freezing rain and soggy snow in Ottawa, when Captain John C. Smith, one of D.O.T.'s Arctic area superintendents, hearkened to the words of John Masefield.

For Ottawa, frigid winter weeks lay ahead. For Capt. Smith, who spends his summers in such bleak places as the windy wastes of Hall Beach in Foxe Basin, a course had been set to east and south. A tall ship, the beautiful Lunenburg schooner "Bluenose II", awaited him at Halifax; in two more days he would be at her helm, bound for the balmy West Indies.

The experience was not a new one for the captain. A native Newfoundlander, he learned his seamanship under sail. His father had been part-owner of a fishing schooner and he was brought up in real seafaring fashion. His first command was the big schooner "Nina W. Corkum", a vessel even larger than "Bluenose II". In summer she was operated in the banks' fishery and in winter she served in the coastal trade. Aboard her, Capt. Smith sailed south, taking salt fish to Martinique and Barbados and bringing back cargoes of rum and molasses.

Later he had "gone steamboating" for nearly 20 years and travelled all over the world. He ended up as mate and master of cargo ships working along the coast of Canada's Western Arctic. This led him to his present post with the Department of Transport. His active seafaring has been largely eclipsed by his new duties but, like so many of the department's desk-bound sailors, the sound of an anchor chain still is vaguely musical.

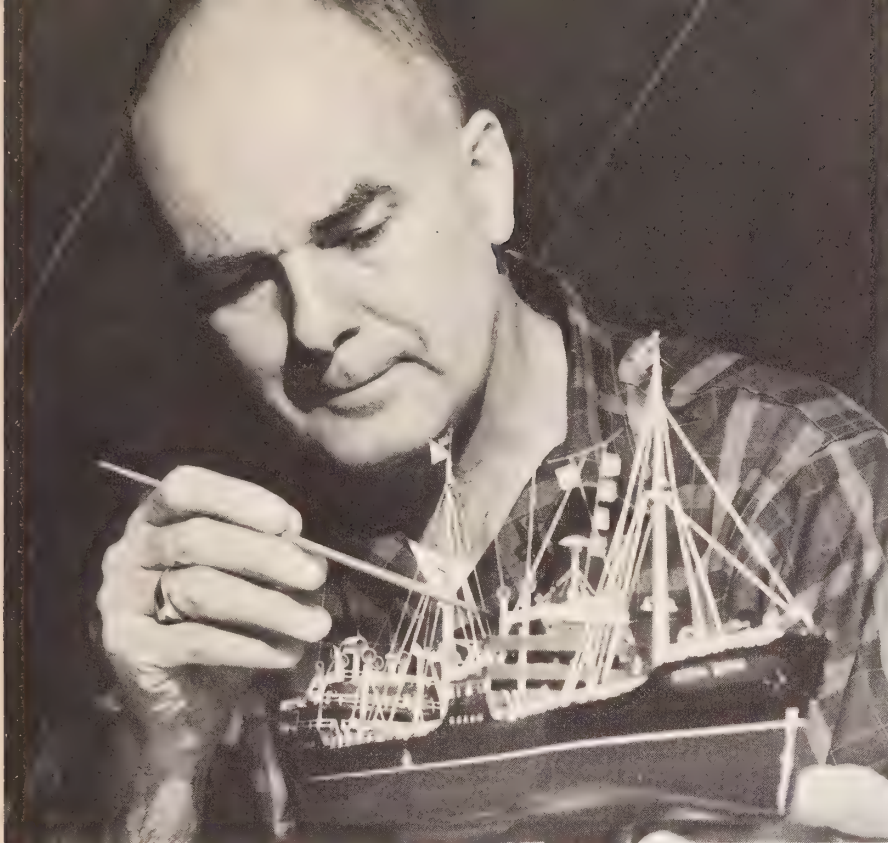
In 1963 Captain Smith read of the launching of "Bluenose II" at the yard of Smith and Rhuland. The same firm built the original "Bluenose", which brought renown to Canada throughout the 1920's and 30's when, commanded by Capt. Angus Walters, she defeated all comers in the international schooner races off the East Coast.

Interested in the new ship, he wrote to her owners, Oland and Son Breweries, Halifax, who had ordered the ship built as a memorial to her now-legendary predecessor, and as a "goodwill ambassador" for Nova Scotia and Canada.

Following correspondence with Col. Sydney Oland and his son Donald Oland, in which he related his own experience as a schooner skipper, Capt. Smith happily accepted their invitation



Ship model making is a hobby with Capt. Smith, who is seen here with a replica of the original "BLUENOSE".



Captain Smith, using a tiny brush, touches up the paint work on a scale model of the tanker "IMPERIAL QUEBEC", aboard which he served as a deck officer.

to sign on as second mate. He was to be paid 25 cents per month as a legal technicality, for a winter cruise to the Caribbean Sea.

On January 12, 1965 "Bluenose II" headed out of Halifax harbor under command of Capt. Ellsworth Coggins, one of the last commanders of ocean-going sail and the man who sailed the Lunenburg-built square-rigger "Bounty" from Nova Scotia to Tahiti for the recent filming of "Mutiny on the Bounty". First stop was at St. George's Harbour, Bermuda, but before "Bluenose II" reached port Capt. Smith had re-lived some of his earlier rough, tough days at sea. The schooner ran into winds of up to 60 knots and had to pound her way through smashing seas. Like her predecessor, she rode the storm well.

The crew, comprised of the captain, 14 regular sailors, two Montreal stock brokers, "Bus" Galt and Richard D. Garipey, and Capt. Smith, were happy, nonetheless, to go ashore in Bermuda and do a bit of sight-seeing. They remained there from January 16 to January 20, then headed for Puerto Rico, where they arrived on the 24th to pick up Don Oland and a charter party for a cruise among the West Indian islands.

Two days later "Bluenose II" was under way, bound for St. Thomas in the Virgin Islands, where they arrived the following day and the ship stayed overnight. While at St. Thomas the schooner was visited by a host of people, for the most part tourists, among them Canadians who had spotted the red-and-white ensign the vessel was flying. From there, "Bluenose" sailed to Tortola, but bad weather made it necessary to bypass that harbor and proceed to St. Kitt's in the Leeward Islands. Here again unfavorable winds and lack of a good "holding ground" for anchorage caused a change in plans and the vessel continued on to Antigua, arriving in English Harbour on January 31.

Twice during the voyage Capt. Smith called Ottawa, using the ship's radio to get in touch with a "ham" radio operator in the Capital. The first time, when "Bluenose II" was southward bound out of Bermuda, he called his wife at their home at 1220 Placid Avenue; on the second occasion he called from Puerto Rico and talked to Cargo Superintendent Ed. P. Flynn in the Hunter Building.

It was at Antigua that Capt. Smith said good-bye to his shipmates and boarded a jet plane that brought him rudely back to the cold, hard facts of life in frigid February in Canada.

The pain of parting was not eased by copies of "Bluenose Newsletter" that thoughtful shipmates continued to send him, reading usually along such lines as:

"The 'Bluenose II' sailed from Port Castries to Marigot Bay today, where she is now anchored, her stern tied to a coconut tree and with bananas hanging from her boom. . ."

"Getting back under sail was a fine experience", the captain said. "It gave me a good opportunity to test my skill as a navigator. I was in charge of the 4 to 8 watch.

"The ship handled beautifully, even in the worst weather. She is fully equipped with the latest navigation aids, of course, such as radar, a Decca Navigator, echo depth sounder, ship-to-shore radio and a good many other refinements unknown in the days of the original "Bluenose".

"Below decks, she is fitted out in luxurious fashion for guests with five handsomely-appointed double staterooms. She also has big twin diesel engines for use when the wind drops."

"Bluenose II" measures 143 feet in length overall, with a beam of 27 feet and a draught of just under 16 feet. Her main top mast towers more than 127 feet above her deck and her total sail area measures nearly 11,000 square feet. Built exactly on the lines of the first "Bluenose", she has inherited the excellent performance of the earlier ship and, in good winds, can log a steady 12 knots without trouble.

Looking back upon his Caribbean voyage, Capt. Smith would not find it a chore to undertake such a trip any winter. Like a true son of Grand Bank, Newfoundland, he probably will never be quite able to ignore the call back to, what Masfield so vividly pictured:

*"The wheel's kick and the wind's song
and the white sail's shaking,
And a grey mist on the sea's face
and a grey dawn breaking."*



Ted Devey examines the organ's magnet box—an electro-pneumatic component.

Do-it-yourself Organ Building — *a full scale hobby*

By YVONNE McWILLIAM

If you were assembling a do-it-yourself pipe organ kit you might need:

- 1519 pipes ranging in length from 16 feet down to $\frac{3}{8}$ of an inch
- two 6×9 foot chests to support the pipes
- a two manual console
- a three horsepower motor
- and a $2\frac{1}{2}$ foot square blower

You would probably also need a large basement, a garage and an understanding wife.

Possessor of all these is Ted Devey, systems engineer with radio regulations engineering section of the telecommunications and electronics branch at Ottawa. Although he is a member of the Royal Canadian College of Organists, Ted doesn't play—yet. By the time he assembles the pipe organ in two years, however, he will have been taking piano lessons for five years and will be ready for organ studies. He can then practise on his own instrument, a 26 rank organ (which is big in case you know nothing about pipe organs).

Ted's interest in organ music goes back to his youth when he enjoyed listening to it, both in and out of church. He decided to one day build his own electronic organ and learn to play, but it wasn't until about five years ago that he switched his thoughts to the much more complicated task of building a massive pipe organ.

After leaving the Navy in 1961 Ted joined the Department of Transport and was posted to Ottawa. There he heard about a local professional organ builder, Raymond Barnes, and sought him out. It was Mr. Barnes who suggested Ted build a pipe organ and who gave him much advice and encouragement.

First acquisition was much of an organ discarded by McPhail Baptist Church followed by an old console from St. Matthews Anglican Church. Before Ted got around to doing anything with them, however, he read about the proposed demolition of a downtown Ottawa United church, the cornerstone of which was laid by Sir John A. Macdonald in 1896. As an organ buff he knew that the church's Breckles and Matthews organ had been completely rebuilt and modernized in 1957 and provided with a

new console. He decided to try and purchase the entire thing and put in a bid to the new owners of the building, who were preparing for demolition. As luck would have it Ted was the only person to do so. The organ was his—for a price, plus dismantling.

Enlisting the aid of two friends, one an organist, he worked evenings and weekends to move the organ over a three week period last December.

Ted feels he got a real bargain. He estimates the work done to the organ in 1957 cost \$7,000 or \$8,000 and that to replace the entire organ, pipes and all at today's prices would cost about 20 to 30 times the price he paid.

The Devey's (yes, Mrs. Devey thinks the project is a wonderful addition to their ranch style bungalow) are planning to enlarge their three bedroom house, to provide an area with a 10 foot high ceiling for the new "member of the household". Meanwhile, Ted plans to install some of the pipes this fall after first getting the blower hooked up to the motor.

Unusual as Ted's hobby might sound, another member of the Telecommunications branch shares it. He is Clarence Thomas, a technician in electronics. Clarence is a member of the congregation of a church which a few years ago discarded its organ when a new one was installed and fell heir to the old instrument. He set up as much as he could in the basement of his home, but many pipes had to remain in packing cases. Now he is having a new house built with a basement designed to accommodate the entire organ. Both he and Mrs. Thomas are taking lessons and, as Mrs. Thomas points out, will have no trouble putting in the time when Mr. Thomas retires in 1967 after 40 years with D.O.T.

In Ottawa, and other Canadian cities, perhaps, there are several homes that either have finished pipe organs installed or have them in various stages of construction. Some of these owners are professional musicians but the majority are people like Ted Devey and Clarence Thomas who may not play, but who regard organ building as a challenging hobby.



Six-year-old Peter gets a lesson in basic finger exercises from Daddy at the two manual console.



The four Devey youngsters—Paul, 2; Peter, 6; Tommy, 11 and Ellen, 8—and their father hold five of the 1519 pipes which go into the 26-rank organ.

Met branch develops new forecasting aid

By WILLIAM DUNSTAN

Most water temperatures are taken by means of an immersion thermometer "in a bucket"; Don Massey of the meteorology branch's climatology division takes them from 500 feet or more up in the air!

Since the beginning of last year, he has been flying over the Great Lakes testing an infra-red radiation thermometer as an airborne indicator of surface water temperature.

T. L. (Lloyd) Richards who, as head of the Lakes Investigation unit, is in charge of the project, explains that some means of taking water temperatures over a large area in a short space of time would be extremely useful in forecasting meteorological conditions over large lakes and their adjacent land areas. It also could help greatly in assessing water losses through evaporation and in studies of the formation and dissipation of ice.

The radiation thermometer seemed worth investigating and the area of experimentation chosen was the Great Lakes, where the

met branch has a continuing need for observations of surface temperatures.

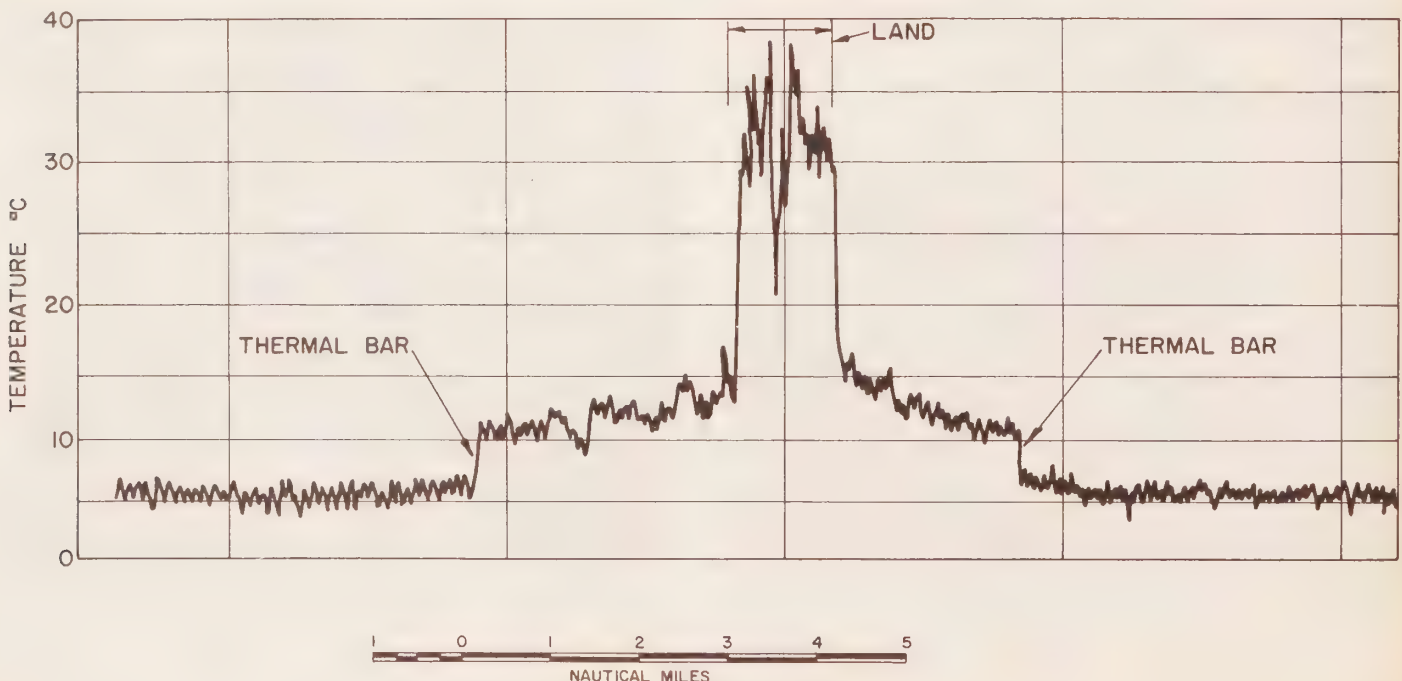
The thermometer works by sensing the radiant energy from the surface at which it is directed. It compares this reading with an accurately calibrated reference black body and converts the difference to an electrical signal which varies with temperature. This reading is shown on a meter and transcribed automatically onto a chart by means of a pen.

Don Massey, a research assistant, made his first flights in conjunction with the meteorological branch's regular ice survey of the Great Lakes, pointing the sensor through a camera-bay in the bottom of a twin-engined Lockheed 14. The first readings fluctuated wildly, mainly because of cold air flowing into the bay around the sensor.

Lloyd Richards took the problem to Wendell Smith, elec-
continued on page 10

This temperature trace was made at the Lake Ontario shoreline last May.

Les températures indiquées ont été captées au-dessus du lac Ontario en mai dernier.



On prend la température de l'eau — à 500 pieds dans les airs

Qui donc aurait pensé qu'on en serait venu un jour à prendre la température de l'eau. . . à 500 pieds dans les airs. C'est pourtant ce que fait Don Massey, du Service de la météorologie.

Depuis le début de cette année, Don fait des envolées régulières au-dessus des Grands Lacs, où il met à l'épreuve un thermomètre aux rayons infra-rouges qui sert à déceler les températures de l'eau.

Le directeur du projet, M.T.L. (Lloyd) Richards, nous explique que cette façon de prendre la température de l'eau, à cause de la vaste étendue de territoire couverte en peu de temps, permet aux spécialistes de formuler des prévisions météorologiques pour les grands lacs et les terres adjacentes. De plus, elle permet d'évaluer les pertes d'eau causées par l'évaporation et d'étudier la formation des glaces.

Ce thermomètre spécial est équipé de dispositifs ultra-sensibles qui captent les éléments de la température. Ces informations sont ensuite transmises à d'autres appareils hautement spécialisés pour être enfin enregistrées et notées automatiquement sur un graphique.

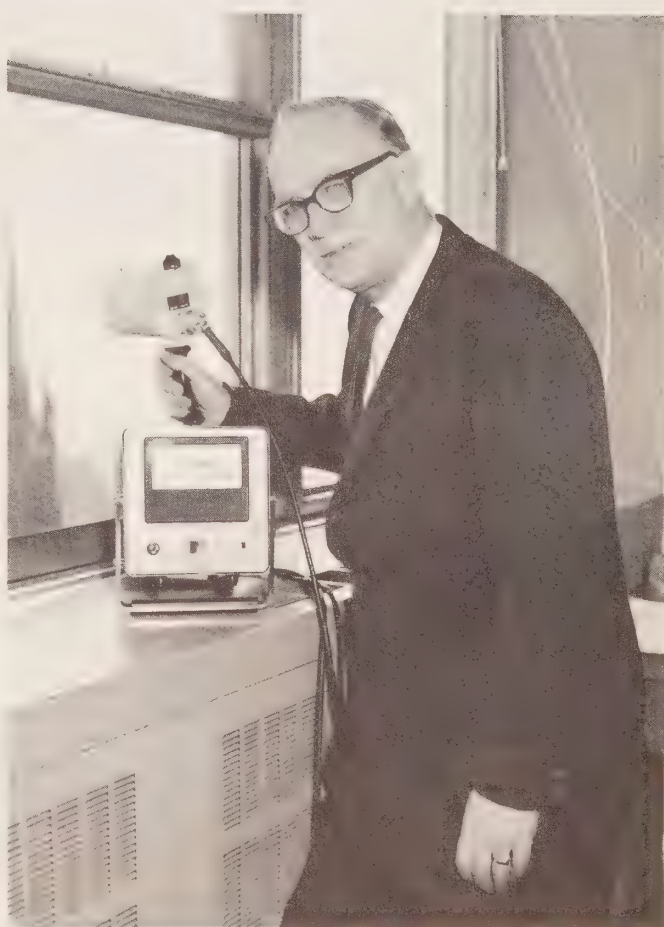
Don Massey a tenté ses premières expériences en pointant tout simplement son thermomètre par une ouverture au fond d'un bi-moteur Lockheed 14. Les indications ont oscillé follement sur le graphique, et cela à cause de l'air froid circulant autour du thermomètre.

Lloyd Richards a immédiatement soumis le problème à M. Wendell Smith, un spécialiste de l'électronique, qui a proposé divers moyens de protéger contre les courants d'air les dispositifs trop sensibles du thermomètre. On a réussi ainsi à réduire sensiblement tous les inconvénients de ce côté.

La prochaine phase du programme a été d'évaluer l'utilité du nouvel instrument, découvrir les erreurs commises dans l'enregistrement des températures et d'en déceler les causes. A cette fin, on a fait appel à la garde côtière qui a prêté les services du Porte Dauphine. Plusieurs envolées ont été effectuées au-dessus du navire à des altitudes variant entre 200 et quelques milliers de pieds. A bord du navire, on a pris la température de l'eau et fait d'autres tests sur les conditions météorologiques. Les résultats ont été comparés à ceux qu'on obtenait du haut des airs. Ce fut un succès. La différence notée ne s'élevait qu'à un degré centigrade, plus ou moins.

Lloyd Richards est convaincu qu'on vient donc de mettre au point un instrument pratique qui saura rendre les plus grands services dans tous les domaines de la météorologie. Il reste encore

continué à la page suivante



Lloyd Richards, who is in charge of the research project, takes the temperature of Lake Ontario by pointing the sensor head of the radiation thermometer out of his office window at the mile-distant lake.

Lloyd Richards, qui a la responsabilité du projet, prend la température du lac Ontario en pointant le thermomètre en direction du lac sis à environ un mille de son bureau.



Research Assistant Don Massey sits at the controls of the airborne radiation thermometer through which he records lake temperature while in flight.

L'adjoint aux recherches Don Massey vérifie les données transmises par le thermomètre qui a décelé, du haut des airs, les températures des lacs qu'on survole.

New Aid:

tronics expert in the instruments division. The result was a baffle, like a streamlined stovepipe, which protrudes from the bottom of the plane and induces a gentle outflow of air from the cabin. Fluctuation was cut down further by raising the sensor higher off the floor in a shock-resistant bracket. As well, they experimented with a polyethylene film placed over the sensor head. This also cut down the fluctuation but made the reading two or three degrees too high.

Next phase of the program was to evaluate the instrument's usefulness for making lake-wide surveys and for detecting small-scale water temperature variations. It also was necessary to study the causes and extent of errors. This is where the department-operated C.C.G.S. *Porte Dauphine* came in. Numerous flights were made over the research vessel at altitudes ranging from a few hundred to a couple thousand feet as Great Lakes Institute technicians on the ship measured water temperatures and the meteorological conditions in the air between the aircraft and the water. In all these tests the new instrument did well and the technique now is considered reliable to within about one degree celsius*.

"We feel that already we have developed a valuable and practical research tool," says Lloyd Richards, "but there are numerous implications of a highly scientific nature that call for more sophisticated research. The higher the aircraft flies, the more distortion there will be in the readings, depending on the

moisture content and temperatures of the intervening air, as well as other factors. The complex problem of determining what precise effect these factors have is being tackled by Rod Shaw, a staff member of the met branch who now is taking his Master's degree from the University of Toronto through D.O.T.'s educational assistance program. He has made this study the subject of his M.A. thesis."

Basic experiments are pretty well completed now and Lloyd Richards expects that operational flights will begin this spring. Besides this specific application, the project has made a considerable contribution to general scientific knowledge.

A report on the test and evaluation of the airborne radiation thermometer has just been published as a meteorological branch technical paper. Rod Shaw's contribution will be described in his Master's thesis, and Lloyd Richards expects to present an overall review of the whole program to a world-wide symposium on the hydrology of lakes and reservoirs to be held in Italy this fall.

La température de l'eau:

évidemment beaucoup de travail à faire dans ce domaine, puisqu'on ne connaît pas encore tous les facteurs qui influenceront sur le fonctionnement de l'appareil à de plus hautes altitudes, par exemple. Un travail de recherches sur ces questions est actuellement en préparation. C'est Rod Shaw, membre du personnel du service de la météorologie, qui prépare présentement sur le sujet sa thèse de maîtrise de l'Université de Toronto.

De son côté, Lloyd Richards se propose de soumettre un exposé général de son programme lors d'un symposium mondial sur l'hydrologie des lacs qui aura lieu en Italie à l'automne de 1966.

*The celsius scale is the centigrade scale, renamed by many scientists to honor Anders Celsius, a Swedish mathematician and astronomer of the Eighteenth century who invented the centigrade scale.

Senior Management Looks on Suggestion Award Programs as Essential

Recently Executive Vice-President and General Manager C. F. McErlean of United Airlines has made some comments about his company's suggestion award program which apply not only to United Airlines but to all concerns operating such programs.

He said that he believes certain things are essential to the success of any organization and near the top of the list is the need for two way communication of information and ideas.

"Each manager must exercise constant vigilance to keep ideas flowing. Anyone in the company with an idea must be given a sympathetic receptive hearing. A sure way to block communication channels is to ridicule suggestions or fail to give sincere consideration and study to all ideas submitted."

Mr. McErlean concluded by saying: "Equally important to the flow of ideas is the necessity to keep open channels of discussion for management of all levels within and between administrations and departments. We must welcome constructive clashes of thoughts and ideas if we are to find the best solutions to the vast problems encountered in a successful business venture."

Secretary of D.O.T.'s suggestion award plan Ted Howe

estimates that 500 suggestions are made by D.O.T.'ers every year. Each is carefully reviewed, discussed and evaluated before being accepted or rejected.

Awards made in the past few months include a \$50 one and two \$40 ones.

R. T. Bodkin, a technician, electronics at Abbotsford, B.C., received the \$50 award for recommending that good used tubes from the Terrace localizer be reused in other communication equipment. Adoption of the suggestion means an annual savings of \$1,200 for the department.

David V. Knight, a fire fighter at Saskatoon Airport suggested that a pressure gauge and hand throttle be installed on the roof of crash trucks allowing one man to operate the turret and still have control of the engine. The idea was accepted and Mr. Knight was awarded \$40.

Technical officer L. G. Nelson, headquarters telecomm, suggested certain revisions and up-dating of the CATV inspection report which resulted in considerable savings of man hours of radio inspectors' time. For his efforts he received a \$40 award.

Other winners include:

NAME	POSITION	LOCATION	AMOUNT
R. Conibear	technician, electronics	Ottawa	\$25
G. L. Desrochers	radio inspector	Montreal	\$30
" "	" "	" "	"
J. T. Hart	radio operator	Sarnia, Ont.	\$30
J. B. Williams	technician, meteorology	Vancouver	\$10
D. H. Walker	technician, electronics	Ottawa Airport	\$15

A Posting to Isolation

By BETTY HEALEY

Editor's note:

D.O.T.'er Arthur Healey was officer-in-charge at Pachena Point Marine Radio Station from 1949 to 1955. With his wife Betty and three children, Ann, John and Michael who were then 12, 8 and 7 years of age respectively, he spent six years at this isolated post. He went from there to Alert Bay and last summer took over as officer-in-charge at Victoria Marine Radio.

Access to Pachena Radio, which was closed down in 1958 after 45 years of operation, was by lighthouse tender, or Bamfield lifeboat, and then by workboat through the surf to the bonnet-sling; then highline up the cliff. If one was a good hiker, it was possible to trek the nine miles from Bamfield to Pachena—and that was how the Healey's first got there.

Today, living once again in a large urban community, Mrs. Healey recalls the rewarding experiences shared by the family during that six year period. The children are now young adults: Ann is married and the mother of four children; John received a Bachelor of Education degree last year and is now teaching at Burns Lake, B.C., and Michael, working towards a Master's degree in zoology at UBC, plans to go to Europe for Ph.D. studies.

The following article first appeared in the December, 1965 issue of Tel-Talk, an interesting newsletter edited by Maintenance Supervisor R. H. M. Lobb for Vancouver region telecommunications personnel.

On first hearing that we were going to live at Pachena Point, an isolated station on the west coast of Vancouver Island, I was most apprehensive. There were so many things to consider and provide for—schooling for the children, medical attention, lack of the amenities, separation from family and friends. The fear of not being able to cope with these new situations gave me many an anxious moment. Even the word isolation had an ominous sound. Being a gregarious type of person the thought of being thrown on my own resources was quite frightening.

How would the children make out with their school work? What if one of them broke a leg or became desperately ill? How could I bear to be separated from family and friends? What if I didn't like the other people on the station? What if I couldn't get along with them? I was going to have to leave behind all my electrical appliances. How would I manage without them? There would be no theatre, no concerts, no movies. We are creatures of habit and change of environment from the hustle and bustle of



Pachena Point fog alarm building

city life to the awesome quiet of wilderness or lonely island shore seemed overwhelming. I needn't have been afraid. On the contrary, I found it a rich and rewarding experience.

It is true that judging from the standpoint of mileage we would be far from a doctor and a hospital but in reality, my husband assured me, we would be no farther away than the radio communication at the station. If anything untoward occurred we could get medical aid and assistance by word of mouth. Outside stations are equipped with first aid kits. We provided ourselves with one of our own, too, asking advice of our doctor. He also gave us a prescription for a sedative to be used only in an emergency. Fortunately we never had need of more than a 292 to ease the pain of an infected tooth. There are times when evacuation from an outside station is impossible because of weather conditions but these are rare.

We discovered that the correspondence school in British Columbia is the finest of its kind. With a little help and encouragement from us our children received the best education available, perhaps even better than in the average public school. In what other classroom could they have received individual attention from the teacher? What better experience could I myself have had than to review my early education so as to keep one jump ahead of my pupils?

I think the most important part of our sojourn on an isolated station as far as the children were concerned was the fact that they were free from outside influence—we were able to bend the twigs the way we wanted the trees to grow. They didn't really miss companions of their own age. We believe they grew up more independent and self-reliant than if they had remained in the city. When the time came for us to return they made the transition from country life to the classroom with less trouble than we had anticipated. They did have difficulties to overcome but they were able to face up to them in an adult manner that impressed both their teachers and classmates.

We learned a vast number of things about life and living and the country around us that we would never have had the opportunity to discover if we had not undertaken the great adventure. We learned to walk, from our first meanderings on the trails and tentative explorations of the beaches, to the day when with a pack on our backs we could strike out on an 18-mile hike with no trepidation whatsoever. We learned to observe nature at first hand, to scramble up and down cliffs, to explore the woods and the beaches. We examined the myriad shells and sea life. We relaxed in quiet corners. We listened to the never ceasing murmur of the sea; gazed in awe when winter waves thundered and crashed on the rock ledges. We studied the flora and fauna, the migration of birds. We discovered that the forest and the seashore have a special attraction.

Here we had time to think, to wonder and assess. We learned why glorious music is composed; why great books are written. Music was as near to us as our radio. We put our powers of concentration to work and studied the classics as well as we could within the circle of our limited knowledge. We trained ourselves to listen for recurrent themes, to identify different instruments. We provided the children with some musical instruments and taught them the little we knew and persuaded anyone with any musical ability to help us out.

It was our experience that we did not find ourselves lonely and shut off from congenial company. There were other operators, some with wives and families, some bachelors. Counting the two lightkeepers, there were 17 people, including children, on the station. The personnel changed considerably over the years we spent at this outpost and we were constantly adjusting to new faces and personalities. This was a test of our ability to get along with other people no matter what their opposing ideas and ideals. In the city we had been free to pick and choose our companions and naturally selected those who were compatible. Here we met all kinds of different people. We learned to have patience with their foibles, for as sure as little apples are green we had plenty of our own. We felt then, and still feel, that learning tolerance for the other person's point of view is a trait well worth cultivating. For our own peace of mind and for the good of the group as a whole we tried to adjust to and harmonize with these conflicting nuances of character and behaviour. Whatever we felt about misfits, and there were misfits, we kept to ourselves. We tried to be friendly with everyone and not invade anyone's privacy. We enjoyed our privacy too; hours, days kept to ourselves to do all those things we had never had time for before.

How would you fill those hours? Would you like to further

your education? Correspondence courses and university extension courses almost unlimited are at your disposal. You want to write a book? Now is your chance. All you need is a corner with a desk and a typewriter, stacks of paper, and the Open Shelf Library will supply you with reference books. Are you a nature lover? The study of the flora and fauna, not to mention bird life, is fascinating. Are you a photographer? Here you have unlimited opportunity to pursue your hobby. Is your need to paint or draw or fashion a collage? All your materials are at hand—grass seeds, shells, fungi, pebbles or whatever.

Once we became interested in the infinite possibilities that lay before us, we welcomed the chances that came our way. We realized that learning is a very important part of living. If we had remained in the city would we ever have taught the boys the correct care and use of firearms? Would our daughter have been taught household economy, not through having to be careful of the pennies so much, as through the lack of convenience of the ever-ready corner grocery.

We learned to live amicably in a limited community. We shared some of our leisure time with the group and welcomed them all in our home one evening a week in a kind of community social. We needed their company. We needed to get to know them. We needed to listen to what they had to say; some of it trivial nonsense; some of pithy import. We encouraged their talents. We encouraged our own. We felt that we might never have another opportunity.

When we had left the city to travel this unknown path we had made up our minds to make it a happy experience. I think we succeeded and our time on an outside station proved to be a joyful interlude in our lives. We knew from our own experience the difficulties our neighbours were facing and we tried to make it agreeable for them. In doing so we helped ourselves.

My years of isolated experience are a long time behind me now, but I feel from the vantage point of years that living there taught me many things that I otherwise might not have learned. Such things as coping with emergencies (even if only in the larder); getting along with people (many strangers walked in and out of my life—hikers, researchers, frauds, dedicated and sincere men, bewildered young people, sages, countless simple human beings who left some small part of themselves in my hands for which I am extremely grateful); finding out for myself my own capabilities and limitations, for which I am very thankful.

Life is mostly what you make it wherever you are, whatever you are doing. A posting to isolation can be a grand episode in your life if you will let it be.



Pachena Point station dwellings



The Healey's, left to right: Mike, Art, Betty and John



Students operate a simulated control centre. Such centres keep track of planes on long-distance flights, giving control guidance and necessary instructions to the pilots.

They train to be

"Policemen of the Sky"



"Tower to pilot" instructions are given by student air traffic controllers to their associates in the next room who follow flight instructions by guiding individual beams of light, representing airplanes, across a large wall map of the airfield.

"Pull up to the right immediately" said the man at the microphone, and the disk of light that represented a giant jet plane made its approach across the airfield chart. As it turned, however, he realized he had directed a light aircraft into a collision path with the jet. A crash seemed certain.

Then all motion ceased.

"Now", said the instructor as he flipped a switch, "let's see just where you went wrong".

The scene was D.O.T.'s Air Services School at Ottawa, where students learn and practise the techniques of air traffic control under circumstances which closely approximate working conditions at modern airports across the country.

Through ingenious gadgetry, "pilots" follow instructions from a control booth ("tower") and turn various knobs to guide individual disks of light across a wall on which an air terminal map is drawn. In guiding the "flights", the air traffic controller trainee must take into account wind and other climatic factors which are made known to him just as they are communicated to the operational tower.

The functional part of the course also includes controlling flights by means of radar, as in terminal control, and through telephone communication and the recording of data, as in control centres which guide long-distance flights.

In addition to such practice sessions, carried out with the latest equipment under almost precisely the same conditions as "the real thing", there are classes in meteorology, navigation, and various other fields in which an air traffic controller must have some knowledge.

"They have a great deal of basic information to assimilate" says Art Johnson, superintendent of the school. "They must be familiar with air regulations, rules and procedures, weather,

aircraft recognition, aircraft performance and navigation. In the control tower they must be able to determine which of a number of planes will reach the field first, and plan their approaches accordingly. In control centres, they must be able to carry in their minds the changing positions of numerous planes in flight. It's like a big game of three dimensional chess, in which you must plan two or more moves ahead and in which there is no margin for error."

There is a great need for air traffic controllers—not through a lack of candidates, but because only relatively few can meet the extremely high standards.

The role becomes increasingly critical as planes become swifter and more numerous. Until the advent of radar, airport arrivals during adverse weather conditions had to be limited to about one every 10 or 12 minutes; now they are spaced five miles apart, or one every two minutes at current rates of speed. So crowded is the sky between Montreal and Toronto, for instance, that two parallel airways have been set up—one coming and the other going—to speed up traffic.

Art Johnson says there are scores of applicants for this interesting and well-paid career, but many are weeded out in qualifying exams. The successful ones enter the 20-week initial course, which from one-third to one-half fail to finish. Forty nine students are enrolled in the current course.

Following the basic course, an air traffic controller spends three months training in an airport tower and initially up to six weeks in an area control centre.

"It takes about 18 months to produce a licensed airport air traffic controller, and approximately five years to become a fully qualified instrument flight rule controller," says Art Johnson.

"We need all we can get."

Retirements

Octave Hamel, a 42-year veteran radio operator, retired from Montreal Region in December.

The father of 14 children ranging in age from 29 to 9, Mr. Hamel's interest in radio began while he was a boy. He obtained his first class certificate at the age of 23 and immediately applied for and obtained a position as a ship's wireless officer. He spent the following 13 years at sea.

During these years his job took him to England, Germany, France, Belgium, Australia and many tropical ports-of-call. As an employee of the Canadian Marconi Company, he was transferred to a shore posting after his marriage.

Mr. Hamel's first land post was at Grindstone, the Magdalen Islands. The family spent 12 years there and then moved to Father Point. In 1957 Mr. Hamel became a D.O.T. employee and served at Quebec City until his recent retirement.

Most people would be content to sit back and take things easy after 42 years of work, but not so Octave Hamel. He is beginning a new chapter of his life by taking on the duties of doorman at Quebec City's Garrison Club.



Mr. and Mrs. Hamel and 12 of their 14 children.

T. Marcel Tardiff retired from the staff of the St. Lawrence Ship Channel at the end of January. He had been in charge of field operations in the Trois Rivières Section since 1956.

Mr. Tardiff joined the Canadian Hydrographic Service after graduating from Laval University in 1929. He spent nearly 20 years with that government service before leaving in 1947 to go into private business. With his wide experience in charting and channel improvement, Mr. Tardiff joined the St. Lawrence Ship Channel in 1951.

With an inclination to travel and a fondness for fishing and hunting, Mr. Tardiff chose to retire well before the compulsory retirement age in order to enjoy these activities.

A 25-year veteran of the steamship inspection division, *Thomas Ramage* of Halifax retired in January.

Mr. Ramage, a native of Scotland, spent several years aboard Canadian government ships before joining the steamship inspection division in 1940. During his 25 year-D.O.T. career he was based at Halifax, however his job took him throughout the Maritime Provinces. His earlier years at sea took him from the Arctic Circle to Australia so in the days of retirement ahead Mr. Ramage intends to enjoy being at home creating and repairing things in his basement workshop.

Miss A. Muriel Turner, a clerk in the accounts section at St. John, N.B., district marine agency, retired in February. She had completed more than 45 years of government service.

Miss Turner joined the former Department of Marine at St. John in June, 1920. During her years of service she worked under five different marine agents.

Prior to her retirement, Miss Turner was honored by fellow employees. Capt. E. O. Ormsby, district marine agent, presented her with a purse, while Miss Alice Garey presented a bouquet of roses on behalf of the Civil Service Federation.

Harry V. Allan, regional administrative officer with Vancouver air services, retired in January after 38 years of government service.

Mr. Allan joined the old Department of Marine in 1928 as a radio operator. He served in the Maritimes and at Fort Churchill before moving to British Columbia to work in the West Coast Marine radio service. In 1938 he transferred to aviation radio and during World War 2 was involved in developing many aeradio stations on the Prairies and in North Western Canada.

Mr. Allan was appointed district administrative officer at Edmonton in 1948 and in 1955 was transferred to Vancouver as regional administrative officer.

At a dinner held in his honor Mr. Allan was presented by Regional Director Dr. T. G. Howe with several gifts from his coworkers. Mrs. Allan, too, was honored.



New appointments in Financial Services

Early in the new year the appointments of Mr. W. J. Murphy, as chief of financial audit and Mr. Alex Campbell, as chief financial officer, administration, were announced.

A native of Peterborough, Ontario, Mr. Murphy attended high school there and in 1932 graduated from Peterboro Normal School with a 1st class teacher's certificate. In succeeding years he obtained several certificates in art and physical education training and in 1940 completed a four-year evening course at the University of Detroit which led to a diploma in commerce and finance.

Mr. Murphy taught elementary school from 1932 until 1941 and then joined the RCAF as an administrative officer. He served in Canada, the United Kingdom and Italy and at the time of discharge in 1945 had attained the rank of Squadron Leader.

From 1946 to 1948 Mr. Murphy was with the Department of National Defence, first as assistant financial superintendent (Air) and as chief supervisor, central pay accounts (Navy). He joined D.O.T. as administrative assistant to the chief of financial services in 1948. Three years later he was appointed assistant chief and, in 1959, became chief.

In his new position Mr. Murphy will be responsible for the establishment and maintenance of a financial audit program throughout the department.

Mr. Campbell was born and educated in Ireland. Prior to coming to Canada he was employed in the public accounting field.

In 1952 he joined H. J. Heinz Company in Leamington, Ontario and during the next 10 years held such positions as internal auditor, department head of general accounting and department head of cost accounting. In 1962 Mr. Campbell joined

Kayser-Roth of Canada Ltd. in London, Ontario as manager of cost accounting. Two years later he was appointed comptroller of Spramotor Ltd., also of London, and left in 1965 to join the public service as senior cost research analyst with the Board of Transport Commissioners.

Mr. Campbell's new duties with D.O.T. will centre, for the present, on the implementation of the new financial management program throughout departmental staff groups. At a later date he will assume supervision of financial services for these groups.

Mr. Campbell is a registered member of the Society of Industrial and Cost Accountants of Ontario. In obtaining his R.I.A. degree he was awarded the Ontario Society's silver medal for the highest mark in industrial legislation and the Canadian and Ontario gold medals for the highest mark in advance cost accounting

1965 Fire Prevention awards to DOT airports

Mr. James A. Byrne, (left) Parliamentary Secretary to the Minister of Transport, presents the 1965 fire prevention award winning certificate to Mr. H. Gourdeau, executive assistant to the assistant deputy minister, air.

The presentation, which took place at the Parliament Buildings in Ottawa on February 22, was on behalf of the D.O.T. airports which won awards in the 1965 Government of Canada Fire Prevention Contest.

Competing in a class of 278 entries, Vancouver International Airport placed 10th; Edmonton International Airport, 12th; Torbay Airport, St. John's Nfld., 13th; Halifax International Airport, 16th; Moncton Airport, 18th; and Ottawa International Airport received honourable mention.

The 65 air services entries in the contest stressed the year-round fire prevention programs carried out at each site and in addition included the continuous crash fire rescue training.



Cross — Canada Dateline

Moncton, N.B.—Managers of the newly decentralized areas of the Moncton region telecommunications and electronics branch were brought together in November for a two-week training course. The course covered such subjects as effective financial and personnel management, and the organizational structure of the decentralized areas.

The telecommunications and electronics branch of the department provides extensive domestic and international communication services, both air and marine, and maintains electronic navigational aid facilities for both. Radio and teletype communications assist in the control of air traffic at all major airports in New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland. A safety service is maintained for mariners on a continuous basis by marine coast stations located at strategic points on the East coasts.

Navigational aids include Decca and Loran transmitting systems for marine and air usage, low frequency and high frequency radio ranges for guidance of aircraft, surveillance radar for air traffic control, instrument landing systems and precision approach radar to assist aircraft landings, harbor and meteorological radar systems and numerous radio beacons located on airway routes for aircraft and on the coasts for the guidance of shipping.

Representatives from the 12 areas established throughout the Atlantic Provinces and Magdalen Islands were welcomed by J. A. Lenahan, regional director of air services at Moncton.

Toronto—In March twenty-five Canadian weather observers received pendant type wall barometers as awards for excellence in weather observing and reporting. Among the recipients was Mr. W. H. Wearne, of Telkwa, B.C., who has been taking regular weather observations for the meteorological branch since 1922. This was the second award to Mr. Wearne.

In announcing the awards, J. R. H. Noble, director of the meteorological branch, stressed that Canada is particularly fortunate in having the co-operation of many individuals in maintaining weather stations. These co-operative weather observers are supplied with instruments by the branch. They take time each morning



Front row, left to right: J. Strong, Gander; H. Moore, Halifax; J. Alfred, Ottawa; R. Read, Moncton; P. Bowes, Ottawa; E. Brown, Saint John, N.B.; and R. Austin, Yarmouth. Back row: M. Behune, Sydney; C. Le Gresley, Grindstone; J. Anstey, St. John's, Nfld.; E. Funston, Goose Bay; D. MacKay, Trepassey, Nfld.; H. Garland, Fredericton; J. Wilmhurst, Charlottetown and G. Conrad, Moncton.

and evening to observe and record observations of temperature and precipitation. The observers at several of the 2300 weather stations in Canada have performed their duties for many years in the public interest without remuneration from the meteorological branch.

The weather reports submitted by the co-operative observers, along with reports received from 275 stations staffed by employees of the department, are used in the compilation of weather statistics for the various monthly reports published by the branch.

The awards are the twelfth of such annual awards. Winners were selected on the basis of faithful service over a period of at least five years, along with excellent weather reporting. To some of the observers, weather is an interesting hobby, others make use of the observations in their business activities and some take the observations solely as a public service.

Point Edward, N.S.—The first edition of the Dolphin, the Canadian Coast Guard College newspaper, appeared on the "Stands" in December. Cost—10 cents a copy. It was comprised solely from contributions from cadets ranging from comment on the course content, to personal items about fellow students.

It is a snappy little paper, which should improve with each issue.

Point Edward, N.S.—During a pre-Christmas visit to the Canadian Coast Guard College, Assistant Deputy Minister, Marine, Gordon W. Stead, announced his intention to donate an annual trophy for the best all-round first year cadet.

Mr. Stead played an important role in the establishment of the college and it was thought fitting, to ensure that his name will be associated with the college in the years to come, that the trophy be named the "Stead Trophy".



Kamloops, B.C.—Kamloops Airport Staff walked off with top honours, the Doc Quealy Award, in Vancouver air services region's 1965 annual fire prevention contest. They topped entries from 21 stations.

The Kamloops entry showed a considerable amount of effort had been expended by each member of the three-man staff. The number of fire prevention activities conducted throughout the year and the preparation of the winning entry indicated an upsurge over Kamloops fire prevention activities of previous years.

In presenting the award to Airport Manager W. Rempel, Mr. E. Hickson, D.O.T. chief of airports, commented on the fine efforts shown in displays at Kamloops to make the public aware that fire prevention is initially its responsibility. Mr. Rempel also received a letter of commendation from the B.C. deputy fire marshal.

At left is one of the Kamloops displays of equipment and posters set up in the terminal building during fire prevention week.

Appointed to Information Services

Edouard (Eddie) Deslauriers, formerly news editor with Ottawa's French-language daily newspaper "Le Droit", has joined information services as a public information officer. Among his duties, he will be serving as French editor of "the DOT."

Mr. Deslauriers is a native of Ansonville, Ontario, a small community near Timmins. He attended primary school at Iroquois Falls, Ontario, and secondary school at Sacred-Heart College in Sudbury. In 1949 he moved to Ottawa where he attended the University of Ottawa. Graduating in 1952 with a bachelor of arts degree and a baccalaureate in philosophy, he entered the newspaper field as a cub reporter with "Le Droit".

During his years with the newspaper Mr. Deslauriers covered the regular Ottawa "beats" for six years and was then assigned to head the paper's Hull office. In 1961 he became city editor and in 1965 news editor.

His addition to the information staff fills a long-standing need for a person to produce press releases, speeches, articles and other written material in the French language.

Nomination au service d'information

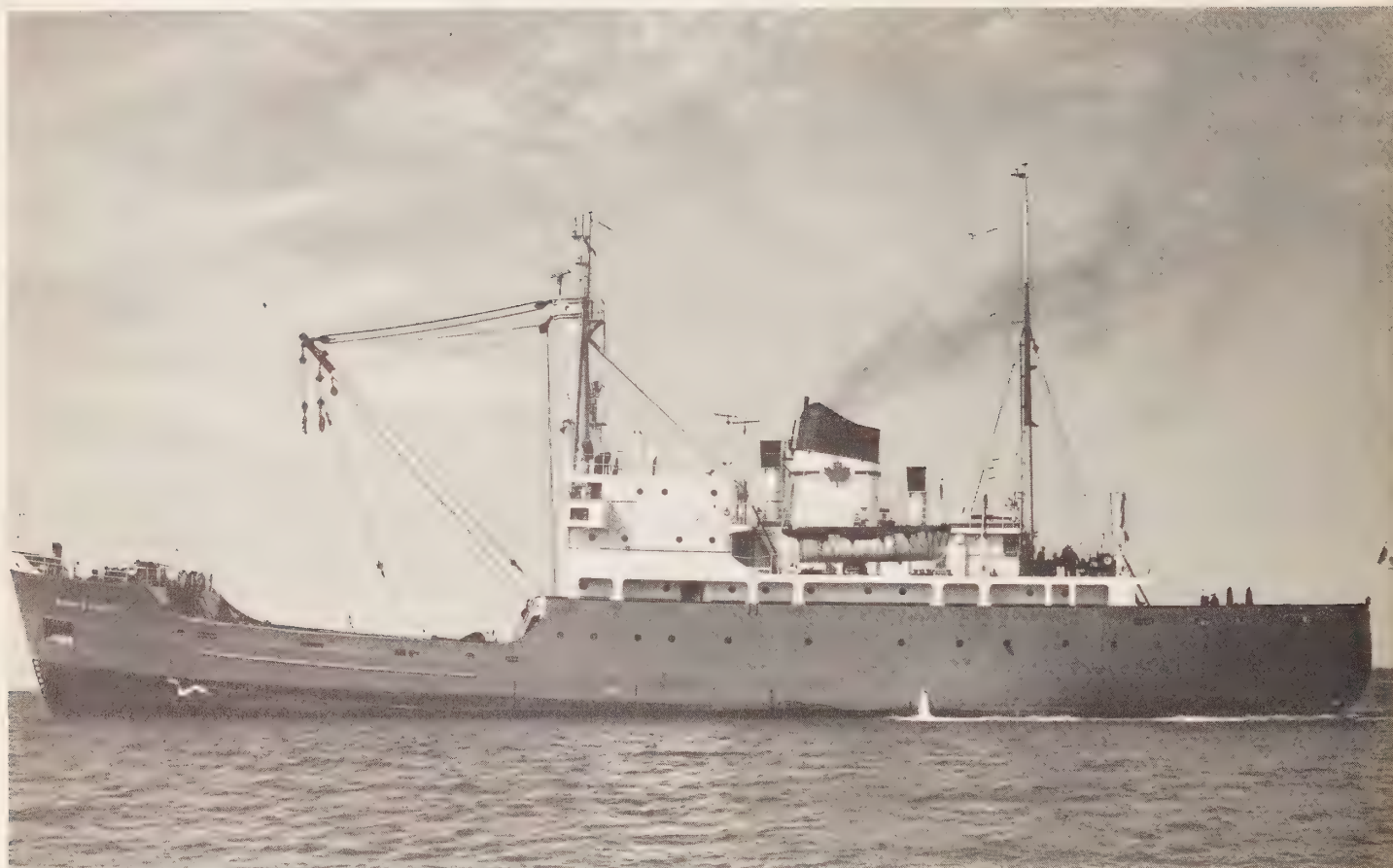
Edouard (Eddie) Deslauriers, ci-avant chef de l'information au journal «Le Droit», à Ottawa, vient de passer au service du ministère à titre d'agent d'information. Il se joint donc, par le fait même, à l'équipe qui s'adonne à la rédaction de la revue «the DOT».

M. Deslauriers est natif d'Ansonville, Ontario, petite localité sise près de Timmins. Il a fréquenté l'école primaire d'Iroquois Falls, Ontario, puis a fait son cours secondaire au collège du Sacré-Cœur, à Sudbury. En 1949, il est passé à l'Université d'Ottawa, où il a décroché son baccalauréat des arts et un baccalauréat en philosophie en 1952. La même année, il passait au service du journal «Le Droit».

Au cours de son stage au journal, M. Deslauriers s'est adonné au reportage général dans à peu près tous les services du quotidien pendant six ans. Puis, en 1958, il prenait la direction du Bureau de Hull du même journal. En 1961, il devenait chef adjoint de l'information, puis chef de l'information en 1965.

Sa nomination au service de l'information remplit un vide qu'on cherchait à combler depuis déjà longtemps. Les services d'un rédacteur de langue française étaient en effet réclamés depuis plusieurs années.

Canadian Coast Guard ALBUM



CCGS WALTER E. FOSTER, an icebreaking lighthouse supply and buoy vessel, was completed at the yard of Canadian Vickers Limited, Montreal, in December, 1954. She is attached to the Saint John, New Brunswick, district marine agency of the Department of Transport.

CCGS WALTER E. FOSTER

LENGTH: 229 feet, two inches.

BREADTH: 42 feet, six inches.

DRAFT: 16 feet.

POWER: Steam, two Vickers-Skinner Uniflow engines developing a total of 2,000 shaft Gross tonnage 1,672.

Canada, Dept. of Transport

DEPOSIT OF MATERIAL

the **dot**

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COVER

A cadet raises the coast guard flag on the grounds of the Canadian Coast Guard College at Sydney, N.S.

COUVERTURE

Un cadet hisse au mât le drapeau de la garde côtière, sur les terrains du Collège à Sydney, N.-É.

Editor Yvonne McWilliam

Rédacteur français Edouard Deslauriers

THE DOT is a Department of Transport staff magazine published under the authority of the Minister, Hon. J. W. Pickersgill, by the Information Service Division.

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ROGER DUHAMEL F.R.S.C., QUEEN'S PRINTER AND
CONTROLLER OF STATIONERY, OTTAWA, 1966

ROGER DUHAMEL M.S.R.C., IMPRIMEUR DE LA REINE
ET CONTRÔLEUR DE LA PAPETERIE, OTTAWA, 1966

"The dot" en quête d'un nom français

Désireuse d'améliorer son service, la rédaction cherche présentement à introduire dans la revue des employés un plus grand nombre d'articles exclusifs rédigés en français. C'est également notre intention de donner à la revue, le plus tôt possible, un nom typiquement français qui s'ajoutera à celui qu'elle porte présentement, «THE DOT».

A cette fin, on a décidé de faire appel à la collaboration de nos lecteurs. Cet appui est essentiel, si nous voulons que notre revue conserve en tout point son caractère bilingue. Nous avons actuellement aux Services d'information du ministère un rédacteur de langue française qui est bien disposé à faire sa part, mais il a besoin de l'appui des membres du personnel, particulièrement de ceux d'expression française.

Cherchons d'abord à donner à la revue un nom français approprié. Toute suggestion du personnel à ce sujet serait fort appréciée. Il devra évidemment s'agir d'un nom court et concis qui rend bien l'idée qu'on se fait d'une revue qui renferme des écrits traitant du transport en général et de sujets s'y rapportant.

Par ailleurs, nous sommes également en quête de sujets qui pourraient faire l'objet d'articles intéressants dans la revue. Dans un ministère dont le champ d'action est aussi vaste que celui-ci, il ne devrait pas y avoir de difficulté à trouver des sujets appropriés. Il s'agit d'y penser. S'il vous vient une idée, transmettez-la à la rédaction. Mieux encore, allez-y de vos propres écrits, et nous nous efforcerons de les publier.

La rédaction



FROM THE DEPUTY MINISTER

I have just been reviewing departmental plans for special training of our employees at headquarters and in the field during 1966-67. It has reminded me how large are the new problems we face in connection with changes in organization being developed by the Treasury Board and the Civil Service Commission in regard to financial management and to personnel relations in the public service. New accounting and reporting systems, greater delegation of responsibility to regional and field offices, longer range advance programming, proposed arrangements for collective bargaining in the government service, and the whole field of relations with our employees are all in the course of substantial change.

We wish to assist our staff in the department, at all levels, in regard to these matters. Our annual training program for employees represents the largest that we have ever undertaken. It includes attendance at short seminars and longer courses, some organized by the department itself, some by the Civil Service Commission, and some by groups completely outside the government service. It is, in part, aimed at maintaining the technical competence of specialized personnel, but in a great many cases is related to problems of management and personnel relations. In total, over twenty percent of our employees will be participating in specialized training during 1966-67. This scale will have to be maintained if we are to ensure our efficiency and adjust to the future.

J. R. Baldwin

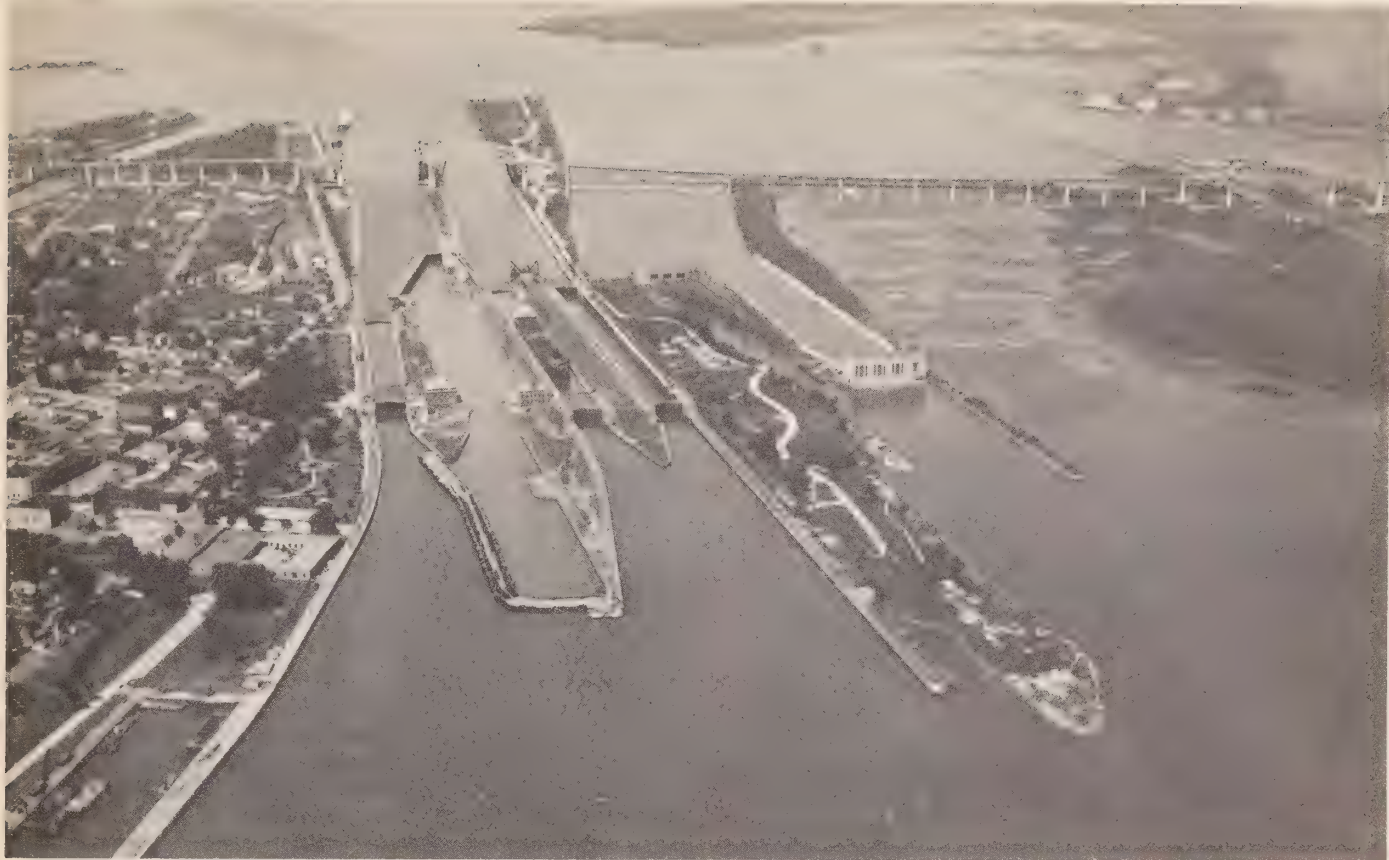


LE MOT DU SOUS-MINISTRE

Je termine l'examen des projets que le Ministère envisage de mettre en œuvre en 1966-1967 pour donner une formation spéciale aux employés du bureau central et des bureaux extérieurs. Je me rends compte de l'envergure des nouveaux problèmes qui se posent par suite des changements que le Conseil du Trésor et la Commission du service civil apportent au régime de la gestion financière et des relations avec le personnel dans la fonction publique. Nouveaux systèmes de comptabilité et de présentation de rapports, délégation plus grande de pouvoirs aux bureaux régionaux et locaux, programmes à plus long terme, modalités visant la négociation collective dans la fonction publique, relations avec le personnel, tout est en voie de transformation.

Nous voulons aider le personnel du Ministère, à tous les échelons, à se préparer à œuvrer dans ce nouveau climat. Notre programme annuel de formation est plus vaste que jamais. Il comporte des cycles d'études et des cours organisés soit par le Ministère, soit par la Commission du service civil, soit par des organismes qui ne relèvent pas de la fonction publique. Il porte entre autres sur le maintien de la compétence technique du personnel spécialisé et, dans bien des cas, sur des problèmes de gestion et de relations avec le personnel. En 1966-1967, plus de 20 p. 100 de nos employés recevront une formation spécialisée. Pour assurer l'efficacité de nos services et les adapter aux conditions de l'avenir, nous devons de toute nécessité nous en tenir à cette proportion.

J. R. Baldwin



The Sault Ste. Marie locks and control facilities at the outlet of Lake Superior. More tonnage passes through these locks than through the Panama, Kiel and Suez combined.

Water, water, everywhere . . .

And Every Drop Precious

By Yvonne McWilliam

So fashionable is water as a topic of conversation these days that it has almost reached the cocktail party stage—albeit in a new and different form!

There seemed to be no end of problems in 1965 from the lack of one of nature's most abundant substances. Anything one read on the subject was sure to contain something about low water levels on the Seaway, rationing in New York City, drought conditions in Eastern Ontario or pollution in Lake Erie.

To Canadians, in particular, this seems strange indeed since water is our greatest natural resource.

A country's growth and development is more dependent on the size of its water resources than on any other natural resource, many experts feel. In Canada, we have, for the most part, an abundance of water. But there are still areas where supplies are insufficient or unusable due to pollution.

Certain facets of the water problem are of immediate concern to the Department of Transport. This concern arises from the dependence of marine transportation on adequate water depths and other factors relating to water control, such as the speed of currents and ice abatement in navigable areas.

In addition to the department's responsibilities, there are also those of National Harbours Board and the St. Lawrence Seaway Authority for which the Minister of Transport answers to Parliament.

A close liaison exists among these three bodies through direct discussion at the operating level, virtually on a day to day basis, on all details of water use on the St. Lawrence River. The liaison organization is called the Navigation Committee on Great Lakes-St. Lawrence River Regulation and its chairman is Ralph Smith, chief of D.O.T.'s hydraulics studies division.

Flow of water in the St. Lawrence is regulated by works for the development of hydro-electric power. These were constructed and are operated in accordance with an order of approval issued by the International Joint Commission (IJC), which has to do with the development of rivers of common interest to Canada and the United States, and which administers such legislation as the Boundary Waters Treaty of 1909.

The commission created the International St. Lawrence River Board Control to ensure its order of approval is complied with and to advise on all matters related to flow regulation. The board has eight members—four Canadians and four Americans. Each of these eight men is a recognized expert in the field of hydraulic engineering and water management. D.M. Ripley, director of D.O.T.'s marine hydraulics branch, is one of the Canadian members. Others are a senior official each from Hydro-Quebec and Ontario Hydro and the director of the water resources branch of the Department of Mines and Technical Surveys.



The Great Lakes Basin.

Low levels on the Great Lakes may have been a cause of immediate concern the past few years, but in recent months they have undergone a quick, dramatic change and are now exhibiting a strong tendency to approach more closely to their average values—average values of the past 105 years, that is. This already prompts some farsighted people to worry again about high water such as the floods experienced in 1952. As recently as this spring there was much damage to shoreline properties on Lake Erie and Lake Ontario caused by wave action resulting from excessively high winds.

To solve the low water problem might simply create more difficult problems. The low levels of recent years have generated demands that something be done to control the levels of all lakes, rather than only of Lake Superior and Lake Ontario as is presently the case.

One of the more frequently heard suggestions for regulating the levels of the Great Lakes is that the lakes should be regulated constantly at their long-term average levels. To maintain a constant level it would be necessary in wet periods to increase the flow in the Niagara, Saint Mary's, Detroit and St. Clair Rivers by a volume four or five times as great as they normally carry. Detroit, Windsor, Niagara Falls, Buffalo and other riverside areas would get unpleasantly wet. On the other hand, in periods of drought, such as we have had for the past few years, it would be necessary to reduce drastically the flow in the rivers and perhaps even Niagara Falls would run dry.

Property owners around the lake might be happy, but the Ontario Hydro would find it difficult to operate their plants at Niagara and Barnhart Island because sometimes there would be a great deal more water than they could use; at other times, not enough to keep the turbines running. Similarly, water depths

for navigation would be inadequate in low water periods to carry Seaway traffic.

What the power interests would prefer is a uniform flow, in which case the lake levels would go higher and lower than in the state of nature. Such levels would not be satisfactory to navigation on the lakes or shore property owners. Even now at Niagara Falls water is pumped during the night hours into storage basins for use in power production at peak periods. If this were not the case, tourist traffic at the Falls would, like the water over the famous falls during daylight hours, be reduced to a mere trickle.

From all this, it is obvious that the needs of those using the waters of the Great Lakes-St. Lawrence River system—for navigation, power, sanitation, pleasure and so on—must be fully recognized. Any scheme for control of the unusually high and unusually low levels which experience shows always occur, must dovetail the needs of all.

What it is hoped to achieve is a range of levels that will satisfy most of the requirements of everybody without causing inconvenience or substantial damage to anyone. It is a situation where everyone agrees on the desirability of the common omelette, but it's breaking his egg which hurts.

At the present time, the International Joint Commission is undertaking a major study of the Great Lakes to determine whether it would be practical and in the public interest to regulate the levels of the lakes so that extreme highs and lows would not recur. Ralph Smith was appointed to the technical group responsible for these studies. As well, the department, through its meteorological branch, will be supporting the work of the IJC with expert scientific knowledge on the influence of precipitation, evaporation and other meteorological factors on the supply of water in the Great Lakes and St. Lawrence River.

In all these studies, the scope of the IJC mandate includes the St. Lawrence River requirements, as do the steps being taken by D.O.T. to improve the river for navigation, in full recognition of the fact that the Great Lakes-St. Lawrence system must be treated as a single hydraulic entity.

At the present time there are dams or control works at the outlets of Lake Superior and Lake Ontario. The levels of these two lakes have been controlled and the extremes of rise or fall modified. For instance, in the summer of 1965 the level of Lake Ontario was more than a foot higher than it would have been under natural conditions.

Natural conditions—precipitation in the form of rain and snow—just haven't been abundant enough in the past few years to keep the water levels up. As a result, water stored in the lakes since the wet years of the '50's is gradually flowing out or evaporating without sufficient precipitation occurring to replace it. Fortunately, precipitation during 1965 on the Great Lakes improved considerably, totalling slightly more than average.

The average amount of rainfall over the past 50 years in the Great Lakes area has been about 32 inches annually. It doesn't

sound like much, but it means almost 700 billion tons of water fall on the drainage basin above the outlet of Lake Ontario (an area of about 300,000 square miles) in an average year. Taken a step further, this amounts to seven million gallons per year for every man, woman and child in Canada.

What happens to this water? Only one third of it flows in the rivers and lakes out to the sea. The rest just disappears in evaporation or transpiration—roughly 450 billion tons.

But these are average figures and if we would always have the average most interests would be content.

During the past two years, while the levels have been low, a number of proposals have been advanced for diverting water into the Great Lakes from other sources. Some of the proposals seem fantastic, but they have been made by highly qualified engineers and could technically be carried out—at great cost of course, but nevertheless could be done.

The plan with the most far-reaching effects is one proposed by an American engineering firm and has the backing of the North American Water and Power Alliance. It is based on the concept of continental water sharing for the future welfare and good of the people of the whole North American continent.

At a cost of 100 billion dollars it is proposed that water collected from rivers in B.C., the Yukon and Alaska be diverted to the Western United States and even on into Mexico. Part of the flow would be redirected into the Rocky mountain trench to form a 500-mile reservoir in B.C., with its southern tip in Montana. From there it would be channeled into U.S. rivers and canals.

Another diversion of this scheme would be a transcontinental canal across the Prairie Provinces to Lake Superior that would

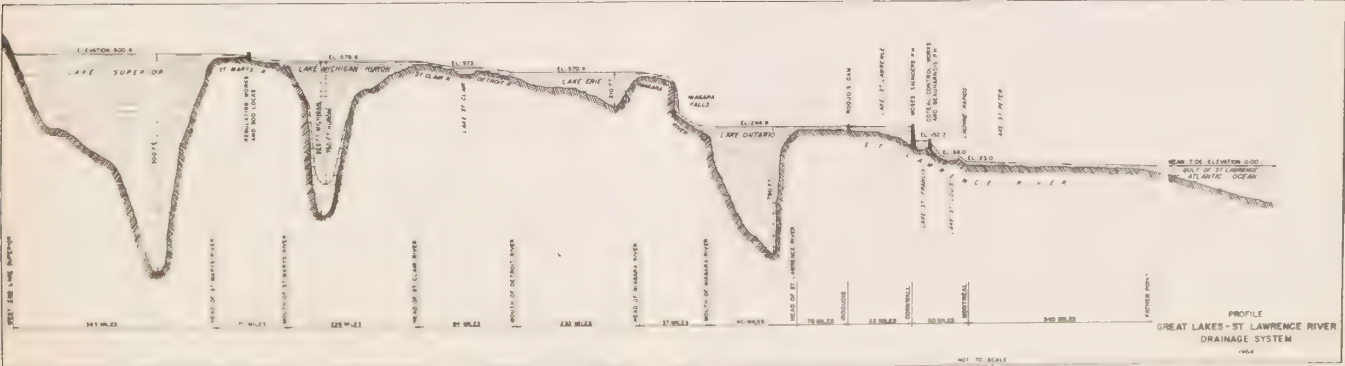
carry ocean vessels from the Pacific across the Rockies, through the Prairies, into the Great Lakes and St. Lawrence River and on out to the Atlantic Ocean.

This may sound impractical, but 50 or 100 years from now the American way of life might well be threatened by a shortage of water and Canada's abundant supply might be their salvation. As Dr. W. K. Lamb, dominion archivist and president of the Royal Society of Canada, has said: "Water promises to be an important matter in the relations of the United States and Canada in the years to come."

Another scheme which has long attracted Canadian interest is that advanced by Sudbury, Ontario consulting engineer Tom Kierans. Known as the Grand Canal scheme, it proposes collecting water flowing into James Bay and redirecting it into a canal that would carry it into the Great Lakes.

Canadian reaction to these and other proposals for diversion of waters, is one of caution as it must necessarily be. Long range weather forecasting becomes a vital factor in any such plans. If the weather can't be forecast far enough in advance with accuracy, it is easy to foresee the danger. Any major diversion of water in the Great Lakes followed by a subsequent year of heavy rain and snow, taken together, could create flood conditions that would be uncontrollable.

If diversion into the system were increased during a period of low levels the full effect of the changes on increased water levels would not be felt for many years. It is quite possible that such increase in levels would not be completely effective until such time as the water levels were high once more, so that the action taken to improve low levels would actually contribute to flooding. The opposite result from reduced diversion is no more palatable. Therefore, controlled diversions into the system are not in themselves the solution to a reduction in the extremes of water levels.





High water levels at boathouse on Georgian Bay, 1952.



The same location during extreme low levels in 1964.

It would seem that before considering diverting more water into the Great Lakes system, we should know what can be done with the water already there. At the same time, Canada will have to assess its water resources, to know how much there is and to estimate how much it needs in the foreseeable future in order to protect Canadian growth potential.

As stated earlier, D.O.T.'s involvement is from the dependence of marine transportation on adequate water depths and other factors relating to water control. The stakes for navigation, commercial shipping in particular, in the subject of the Great Lakes water levels are high. Some 230 million tons of cargo annually move over the lakes and their connecting channels. In the area of commercial shipping generally, the Canadian government's investment in navigation works in the entire system is in excess of a billion dollars. The private sector has several times that figure invested in complementary facilities and equipment. The capacity and efficiency of these facilities bears a direct relationship to the water levels under which they function.

Canada is a long way from the high water mark of its development. It looks as if we will need a lot of water to get there—and that's what we should have under an integrated approach to our water needs.



Recently the Nigerian students were invited to a Government House reception for all foreign students studying at Ottawa schools. They came to school that day in their tribal costumes and the D.O.T. photographer was on hand to get a picture. Unfortunately, a black and white photo scarcely does justice to the beautiful materials and colors. Sitting, left to right: Mr. J. G. Korie, Miss D. Ofilli and Mr. K. F. Olomo. Standing: Mr. B. Najomo, Mr. S. Obika, Mr. B. E. I. Udeji, Mr. J. C. Omezi, Mr. S. O. Oderemi, and Mr. A. N. Okoye.

Nigerian Students at D.O.T. School

In February nine Nigerian students, one a young woman, arrived in Canada to enroll at the department's Air Services School at Ottawa International Airport. As guests of Canada the students will spend the next year and a half studying air traffic control methods and working in various airport control towers.

The students, all with previous experience in air traffic control at Nigerian airports, were greeted at Montreal International Airport in February by a temperature of 17 degrees below zero and their first sight of snow. Considering that when they left Lagos International Airport the previous day the temperature had been 85 degrees above zero, it was quite a shock to their systems. The coldest weather they had ever encountered at home was around 60 degrees above.

The Nigerians are enjoying their stay in Canada and have found everyone friendly, especially the Canadian students with whom they share bus accommodation to and from the school. They experienced a few early difficulties in adjusting to unfamiliar surroundings and highly complex studies, but report they are now becoming accustomed to most things. They give much credit for this to their instructors, who compared unfamiliar things with things with which the Nigerians were familiar.

The group is currently engaged in a 20-week course of study involving air navigation, air traffic control rules and procedures, meteorology and radio aids to navigation. The course will include simulated operations by visual flight rules, as in a tower, and instrument flight rules, as in a centre or terminal control unit. Following this, they will spend from three to six months working in airport control towers and then eight weeks of further studies in terminal units. Before returning home they will work in control centres for some four months.



Miss Ofilli and Mr. Oderemi discuss with Instructor Ron Hart the operation of equipment used in a control centre to record flights and maintain contact with pilots and other air traffic controllers.

Le Collège de la garde côtière- une école unique en son genre

Par ÉDOUARD DESLAURIERS

Le Collège de la garde côtière canadienne, jeune institution qui en est encore à sa première année d'existence, n'ayant ouvert ses portes qu'en septembre dernier, est actuellement en train de former son premier contingent d'officiers qui, demain, prendront la relève sur les navires de la garde côtière, un service dont le passé remonte avant même l'époque de la Confédération.

C'est à l'ancienne base navale de Point Edward, à Sydney, en Nouvelle-Écosse, que 33 jeunes cadets subissent actuellement un entraînement qui, selon le directeur du Collège, le capitaine Gérard Brie, en fera «des techniciens de première valeur et des Hommes (avec un «H» majuscule) qui feront honneur à la garde côtière et au pays tout entier».

Le ministère des Transports fonde en effet beaucoup d'espoir sur l'avenir de ce collège qui est appelé à former une élite qui servira à bord des quelque 60 navires de la garde côtière. On ne compte actuellement que 33 cadets au Collège. On a l'espoir d'en recruter quarante nouveaux pour la rentrée des classes en septembre 1966. D'ici quelques années, on devrait avoir quelque 130 cadets à l'entraînement.

Ce n'est certes pas la place qui manque au Collège, puisqu'il s'agit d'un vaste complexe renfermant une quinzaine d'édifices autrefois occupés par la Marine. On sait que Point Edward était une des bases navales les plus actives sur le continent nord-américain au cours du dernier conflit mondial. Aujourd'hui, chacun des édifices relevant du Collège porte le nom d'un navire de la garde côtière. Ainsi, l'on retrouve, entre autres, le Vancouver, le Labrador, le Montcalm, le Sir Humphrey Gilbert, le C. D. Howe, l'Ernest Lapointe, le William Alexander, le John Cabot, le Walter E. Foster, le d'Iberville, le Tupper, le Bernier, le Ville-Marie, le John A. Macdonald et le Porte Dauphine.

Un collège bilingue

Le collège de la garde côtière canadienne est une institution à caractère bilingue. L'enseignement y est dispensé dans les deux langues. Un des buts d'ailleurs du collège est de former des officiers qui soient capables d'exercer leurs fonctions d'un bout à l'autre du pays, dans l'une ou l'autre des deux langues.

Soulignons, en passant, que la contribution du Canada français au personnel de la «marine civile du Canada» a toujours été fort remarquable.

Depuis les débuts de son histoire, la garde côtière a toujours eu à son service des marins compétents, dont plusieurs, venant du Québec, se sont particulièrement illustrés. Mentionnons, pour n'en nommer que quelques-uns, le capitaine Joseph Bernier, par exemple, et un autre des temps plus récents, le commodore Charles Caron. On n'a pas à rappeler ici en détail la carrière bien remplie de ces gens de mer, dont les noms sont déjà passés à l'histoire. Et, que dire encore des Dufour, des Fournier, des Gagné, des Lavoie, des Pelletier, des Moreau, des Marchant et combien d'autres encore qui, à l'heure actuelle, se signalent au service de la garde côtière.

Actuellement, on ne compte au collège que sept cadets de langue française. On a cependant confiance que le prochain contingent de recrues renfermera un plus grand nombre de candidats d'expression française.

Le but du Collège est évidemment de permettre à des jeunes, soigneusement choisis, de devenir soit des officiers de navigation, soit des officiers mécaniciens. Mais, de plus, c'est une excellente école de formation, où les jeunes des deux langues venant de tous les coins du pays, en fraternisant, apprennent à mieux se connaître et se comprendre mutuellement dans une atmosphère imprégnée de tout le bien qu'on peut tirer de la présence des deux grandes cultures canadiennes sous un même toit. D'ailleurs, au Collège actuellement, en plus des jeunes d'expression anglaise et française, il s'en trouve un d'origine pakistanaise. C'est dire que le Collège a ouvert ses portes à tous les Canadiens, sans exception. Ils y sont acceptés au mérite.

Les matières académiques, dans l'ensemble, sont enseignées dans les deux langues. Afin de bien initier les cadets à cet aspect de leur formation, la direction du Collège a organisé leurs cours des deux premières années de façon à ce que les sujets académiques, en autant que la chose est possible, soient traités dans les deux langues. On y arrive en ayant recours aux services d'un laboratoire des langues.

Ainsi, le cadet acquiert, en anglais et en français, les connaissances de base utiles à sa formation et apprend donc à passer d'une langue à l'autre sans trop d'inconvénient. Enfin, lorsqu'il arrivera en troisième et quatrième année de son cours, il devrait être prêt à recevoir son enseignement dans l'une ou l'autre langue. Le professeur pourra également passer de l'une à l'autre sans que l'étudiant n'en souffre ou ne s'en offusque.

Tout le cours du Collège est évidemment conçu de façon à inculquer aux cadets les connaissances spéciales d'ordre général et scientifique qu'ils doivent posséder, en plus de l'expérience de la vie en mer, pour pouvoir obtenir leurs certificats de compétence de deuxième lieutenant, de premier officier et de capitaine au long cours pour ce qui est de la navigation, et de mécanicien de marine de deuxième et de première classe pour ce qui est de la mécanique maritime. Le programme comprend de plus des cours spécialisés, comme le pilotage, la cartographie et l'océanographie.

En général, les principaux sujets traités sont les mathématiques, la physique, la chimie, une introduction au calcul différentiel et intégral, l'anglais, le français, le matelotage, la navigation, la mécanique maritime, le contrôle des dommages, la lutte contre les incendies, les missions spéciales accomplies par les navires de la garde côtière et l'administration ministérielle.

Ce programme d'études a été préparé conjointement par M. Douglas Williams et le conseiller spécial en bilinguisme, M. Paul A. Chouinard. M. Williams agit présentement comme conseiller auprès du directeur du Collège sur les questions d'ordre académique.

Le projet d'un collège pour assurer la formation des futurs officiers de la garde côtière a été conçu par quelques hauts fonctionnaires du ministère des Transports, dont particulièrement M. G. W. Stead, sous-ministre adjoint, pour la marine, M. A. H. S. Storrs, directeur actuel des opérations de la marine, et son prédécesseur à ce poste, le capitaine Eric Brand, maintenant à sa retraite.

Enthousiasme chez les cadets

Les cadets actuellement à l'entraînement se plaisent énormément dans l'ambiance du milieu, où l'utile se mêle à l'agréable pour rendre la vie au collège la plus intéressante possible. En classe, à l'atelier, dans la salle d'étude, au laboratoire des langues, au gymnase, où que ce soit enfin, le plus grand enthousiasme règne partout.

On a rencontré un jeune cadet tellement épris par son sujet qu'il consacre ses moments libres à des recherches sur l'histoire de la garde côtière canadienne. Mark Purney, âgé de 18 ans, de Duncan, Colombie-Britannique, se propose en effet de faire de la garde côtière le sujet d'une thèse écrite qu'il espère pouvoir terminer avant la fin de son cours de quatre ans.

Les cadets venant du Québec s'adaptent rapidement au milieu. Ils s'y plaisent et se réjouissent de l'occasion qui leur est donnée de perfectionner leur langue seconde, tout en suivant un cours qui leur assurera une brillante carrière au service de leur pays.

Le capitaine Gérard Brie

Le directeur du Collège, le capitaine Gérard Brie, est natif de l'Islet, au Québec. Il est âgé de 43 ans.

Il est fils de marin. Son père, le capitaine Albini Brie, a péri en mer, au large de Sept-Îles, au cours d'une tempête, le 28 octobre

1934. Gérard n'avait alors que 12 ans, et il était l'aîné de huit enfants.

Il fit ses études primaires à l'école de Giffard et son cours classique au Séminaire de Québec où il obtint son baccalauréat ès arts en 1944. Après une année d'étude en génie forestier et arpentage, il entendit l'appel de la mer, et il navigua durant dix ans au long cours. En 1954, il obtenait son certificat de capitaine au long cours. En septembre 1955, il devenait professeur de mathématiques à l'Institut de marine de la province de Québec, à Rimouski, fut promu directeur des études en 1959, puis directeur de l'Institut le 1^{er} février 1961. En avril 1965, il était nommé directeur du nouveau Collège de la garde côtière canadienne à Sydney, en Nouvelle-Écosse.

Dès l'ouverture du Collège, le capitaine Brie a cherché à s'entourer du personnel le plus compétent possible. Ainsi, du côté de la mécanique maritime, il a retenu les services de M. Ted Jenkins, de la région de Prescott, en Ontario, et de M. Paul de la Durantaye, de Québec. Au département de la navigation, on trouve M. Ralph Hemphill, de la Nouvelle-Écosse, et M. Maurice Dubé, de Rimouski.

MM. Jean Fortin, ci-devant du collège militaire St-Jean et Terry McCluskey, du Nouveau-Brunswick, enseignent les mathématiques, la physique et la chimie. L'enseignement des langues, de son côté, est prodigué par MM. Anthony Agemian, qui est d'origine arménienne, Pierre Bourgeault, de Montréal, un ancien professeur chez Berlitz, et Patroclos Canacas, qui est d'origine grecque.

Le directeur du programme d'éducation physique est M. Gérald Leblanc, autrefois d'Ottawa. La surintendance des cadets est assumée par M. Pat Toomey, qui est natif de la Grande-Bretagne. C'est lui qui s'occupe de la discipline et du bien-être des cadets et oriente leurs attitudes et leur comportement. Pour ce qui est du personnel de bureau, la direction en est confiée à un officier de la garde côtière, M. Yves Roberge.

Un salaire aux études

En plus d'être logés et nourris aux frais de l'État, les cadets bénéficient d'un salaire de \$75 par mois durant leur séjour de quatre ans au Collège. Leur cours est en effet d'une durée de quatre ans, mais ils doivent par la suite faire un stage de trois ans dans la garde côtière. C'est dire que le cadet s'engage à demeurer dans la garde côtière pour une période d'au moins sept ans.

Les cours, les manuels et les uniformes sont fournis par le ministère des Transports, et, une fois l'an, l'on assume les frais de retour au foyer par la route la plus économique, moins \$25. Les cadets ont donc l'occasion de visiter leur famille, soit pendant les vacances de deux semaines à Noël ou pendant les vacances semblables durant les mois d'été.

Rien n'a été négligé pour assurer au Collège les débuts les plus prometteurs, et l'on fonde maintenant beaucoup d'espoir sur l'avenir de l'institution.



1. Mr. P. Toomey gives instruction on a "Flying Junior" class sailing dinghy at the boathouse. Cadets are Murray, Parkes and Bentley.

2. Mr. P. Canacas conducts an English class in the language laboratory.

3. This picture taken last September during an orientation cruise aboard the CCGS Edward Cornwallis shows all the cadets registered at the college for the first term.

4. Cadets Levasseur, French and St. Pierre see a demonstration of the power hacksaw in the machine shop by Mr. P. de la Durantaye.

5. Mr. E. J. Jenkins, at the projector, lectures to the cadets on Engineering Knowledge.

6. Cadet Andrews, under the watchful eye of Instructor Gerry Leblanc, practises gymnastics at the vaulting horse.

7. College director, Captain Brie, discusses a course matter with Cadets Maillette, Robertson and Guse.

8. College buildings bear the names of various coast guard vessels. The Bernier Building shown here houses the college's administrative services.

9. Cadets Ross, Theedom and Robertson relax in a cadet's cabin during an off duty moment.

10. Cadets eat at the cafeteria in the Simcoe Building.



1. M. P. Toomey donne des leçons sur la façon de manoeuvrer les chaloupes de sauvetage et autres embarcations légères.

2. M. P. Canacas dirige une classe d'anglais au laboratoire des langues.

3. Cette photo, prise en septembre dernier au cours d'une tournée à bord du Edward Cornwallis, nous fait voir tous les cadets inscrits en première année du cours.

4. Les cadets Levasseur, French et St-Pierre assistent à un cours dirigé à l'atelier par M. Paul de la Durantaye.

5. Le professeur E. J. Jenkins donne un cours de mécanique maritime à un groupe de cadets.

6. Le cadet Andrews, sous la direction de l'instructeur Gerry Leblanc, s'adonne à un cours de gymnastique.

7. Le directeur du Collège, le capitaine Gérard Brie, s'entretient avec les cadets Maillette, Robertson et Guse.

8. Les divers édifices du Collège portent les noms de navires de la Garde côtière. L'édifice Bernier qu'on aperçoit ici loge les services administratifs du Collège.

9. Les cadets Ross, Theedom et Robertson prennent un moment de repos dans la chambre d'un confrère.

10. Les cadets se rassemblent pour le repas dans la cantine de l'édifice Simcoe.

Canadian Coast Guard College— D.O.T's "School for Sailors"

The Canadian Coast Guard College, a young institution just beginning to plot its course, is training its first contingent of officers. Soon they will be called upon to take part in the command of our Coast Guard vessels. The college is the newest adjunct to a service which reaches back to the days before Confederation.

Thirty-three young cadets are now in training at the former Royal Canadian Navy base of Point Edward, in Sydney, Nova Scotia.

"Our objective," according to the director of the college, Captain Gerard Brie, "is to turn out highly trained technicians and officers who will be the pride of the Coast Guard and of the country as a whole."

The Department of Transport is confident the school can fill the executive needs of the 66 vessels of the D.O.T. fleet.

Recruiting is now in full swing, and it is expected that some 40 new cadets will join the ranks this September. Within the next few years there should be about 130 cadets in training at the college.

The college is situated on a vast school campus where there are clustered some 15 buildings formerly occupied by the navy.

Point Edward was one of the most active naval bases on the North American continent during the Second World War. Today, each of the buildings bears the name of a Coast Guard vessel—such names as "Vancouver", "Labrador", "Montcalm", "Sir Humphrey Gilbert", "C. D. Howe", "Ernest Lapointe", "William Alexander", "John Cabot", "Walter E. Foster", "d'Iberville", "Tupper", "Bernier", "Ville-Marie", "John A. Macdonald" and "Porte Dauphine".

The director, Captain Brie, is a native of l'Islet, Quebec. He is 43 years of age.

Captain Brie's association with the sea goes back to his youth. His father, Captain Albini Brie, died at sea in a storm off the coast of Sept-Îles in October, 1934. Gerard then was only 12 years of age and the eldest of a family of eight children.

After attending primary school in Giffard, he moved on to the Seminaire de Québec where he obtained his B.A. in 1944. He then studied forestry engineering and surveying for a year before going to sea.

In 1954 Captain Brie obtained his master's certificate, foreign going and the following year became a teacher of mathematics at the Provincial Marine Institute in Rimouski. In 1959, he was appointed director of studies at this same Institute and, in 1961, became director of the school. He was appointed director of the Canadian Coast Guard College in April, 1965.

A Bilingual School

The Canadian Coast Guard College is a bilingual school. Teaching is in both official languages, French and English. The aim is to train officers who will be able to do their jobs anywhere in Canada, in either language.

At the moment there are only seven French-speaking cadets at the college, but it is hoped that a greater number will be signed up during 1966 recruiting.

The college will train carefully selected young men to become either navigation officers or engineer officers in the Canadian Coast Guard. But, there is more to it than that. Cadets of the two main culture streams in Canada learn to know and understand each other better. The atmosphere is challenging and creative and the cadets realize this. Moreover, besides the French and English-speaking cadets, there is now at the college a young student of Pakistani origin. The college doors are open to all young Canadians, without exception. Cadets are chosen according to merit.

Students at the college receive a \$75 monthly salary throughout the course, plus free room and board. In addition, travelling expenses from the cadet's home to the college will be paid on first joining and once a year thereafter expenses home, less \$25, will be paid. Tuition, text books and uniforms are also provided.

Academic and scientific subjects are, in general, taught in both languages. In order to initiate the cadets to this aspect of their training, the courses of the first two years have been organized so that most subjects are taught in both languages. This is possible by using a language laboratory.

In this way the cadet acquires in both languages the basic knowledge needed to go through his four year course. In the process he learns to go from one language to the other without too much difficulty. When he finally moves into third and fourth year, he should be in a position to be instructed in either. This means the teacher may use either language in class as the mood or idea suggests without inconvenience to the cadets.

The complete course at the college is designed to provide the special academic and scientific knowledge which, in addition to actual experience at sea, are prerequisites to obtaining certificates of competency as second mate, chief officer and master on the navigation side, and second mate and first class marine engineer on the engineering side. The course also incorporates some of the more specialized skills required by a Coast Guard officer, such as pilotage, surveying and oceanography.

In general, the subjects covered are: mathematics, physics, chemistry, introduction to calculus, English, French, seamanship, navigation, marine engineering, damage control, fire-fighting, special operations performed by Coast Guard vessels and department administration.

The school curriculum has been prepared jointly by Mr.

Douglas Williams and the department's special adviser on bilingualism, Mr. Paul Chouinard. Mr. Williams also acts now as an adviser to the director of the college on academic matters.

Mr. Gordon W. Stead, assistant deputy minister marine, Mr. A. H. S. Storrs, director of marine operations, and his predecessor, Captain Eric Brand, are the three D.O.T. officials mainly responsible for the establishment of the college. For several years they had been studying the idea of founding such a school to train future Coast Guard officers and now it is a promising reality.

At the outset, Captain Brie has tried to recruit a competent teaching staff. The engineering department is headed by Mr. Ted Jenkins of the Prescott area, and Mr. Paul de la Durantaye of Quebec. The navigation department is headed by Mr. Ralph Hemphill of Nova Scotia, and Mr. Maurice Dubé of Rimouski.

Mr. Jean Fortin, formerly with Collège Militaire de St-Jean, and Mr. Terry McCluskey of New Brunswick, teach mathematics, physics and chemistry. Languages are handled by Mr. Anthony Agemian, who is of Armenian origin, Mr. Pierre Bourgeault of Montreal, a former teacher at Berlitz, and Mr. Patroclus Canacas, who is of Greek origin.

The physical fitness program is under the direction of Mr. Gerald Leblanc, formerly of Ottawa. The cadet superintendent is Pat Toomey, a native of Great Britain. Personnel and office management is under the direction of Mr. Yves Roberge, a Coast Guard officer.

RETIREMENT



George Phelps, assistant operations supervisor at Toronto Region Air Services, retired February 25 after nearly 40 years with the department.

In 1926 Mr. Phelps joined the former Department of Marine and Fisheries on the east coast as a radio operator. He later served as officer-in-charge of Earlton and London aeradio stations. He moved to the Toronto regional office in 1958.

Prior to his retirement, friends and co-workers honored Mr. Phelps at a dinner. J. G. Leitch, regional controller telecommunications, presented a farewell gift along with the best wishes of all present.



Gerry Cassan - Speed Skating Champion

D.O.T. Youngster i Champion

Eleven-year-old Gerard Cassan, son of Robert Cassan of the Ottawa International Airport maintenance staff, is a Canadian speedskating champion. During the four years he has been competing in local and national championships he has collected scores of trophies, gold medals and ribbons and has set six Canadian records. His accomplishments have far surpassed his youth and size.

Competing for the first time in 1963, Gerry topped the special midget class of the Ontario Outdoor Closed Championships at St. Catharines, Ontario; placed second in two events at the Quebec Outdoor Open; second and fourth at the Canadian Outdoor Open; and first in two events and second in one to be named special midget champion at the Northern New York Outdoor Open at Fort Henry, N.Y. He finished out the year by taking second, third and fourth spots in three events in the North American Indoor Open at Lake Placid, N.Y. All this and he was only eight years old.

The following year he retained his title as special midget champion of the Ontario Outdoor Closed and went on to become champion of the Canadian Outdoor Open winning two firsts and a fourth. As well, in this championship he set two new records, winning gold medals for each, with a time of 26.5 seconds in the 220 yard and 54.9 seconds in the 440 yard events. He established another record shortly afterwards at the Canadian Outdoor Closed at Red Deer, Alberta with a time of 24.9 seconds in the 220 yard class.

Still a midget competitor in 1965, Gerry continued in the winners circle by taking honors at both the Ontario Outdoor Closed and Open Championships. His performance in 1966 was the high point of his career to date. He won the Ontario Outdoor Open Championships and went on to take the Canadian Outdoor Closed Championships at Dawson Creek, B.C. In March, at the Canadian Indoor Closed at Winnipeg he walked, or skated off, with three gold medals and the Dixon trophy for his performance in midget class competition in the 220, 330 and 440. He set a record in the latter event with a time of 47.8 seconds.

As a result of his skating prowess many honors have come young Gerry's way. In 1964 and 1965 he was honored, along with

National Champion

Sur patin à l'âge de huit ans

other Ottawa athletes, at the annual Associated Canadian Travellers sports banquet. He was the youngest person ever to be selected. Those same years he was nominated for the Julien and Daoust Memorial Trophy, awarded to the most deserving French Canadian professional and amateur athletes, in Ontario and Western Quebec. As well, in 1964 he was presented with a civic crest at Ottawa City Hall by then Mayor Charlotte Whitton.

For an 11-year-old Gerry has seen much more of Canada than many adults. He has competed in such places as Dawson Creek, B.C.; Red Deer, Alberta; Saskatoon, Sask.; Winnipeg, Manitoba; Barrie, Toronto, St. Catharines and Kitchener, Ontario; Vaudreuil, Quebec and Lake Placid and Fort Henry, N.Y.

For the grade six student this was his last year in the midget class. Next year he moves up to juvenile ranks and is eagerly looking forward to new competition and bigger challenges. However, he doesn't spend summer months pining for his blades, but rather picks up a lacrosse racket and lends his support to a team which has several times won the league championship.

Un garçonnet de 11 ans, Gérard Cassan, fils de M. Robert Cassan, membre du personnel chargé de l'entretien à l'aérogare d'Uplands, est en train de faire sa marque dans le monde du patinage de vitesse au Canada. En moins de quatre ans de compétition sur les plans local et national, il a déjà remporté une foule de trophées, médailles d'or et autres décorations pour ses prouesses sur la glace.

Lors de sa première compétition, en 1963, il s'est classé premier dans la classe midget aux épreuves fermées de championnat de l'Ontario tenues à St. Catharines. La même année, il décrochait la deuxième place aux épreuves ouvertes de championnat du Québec; il se classait deuxième et quatrième dans une compétition nationale ouverte; premier dans deux épreuves et deuxième dans une autre pour être proclamé champion spécial

de la classe midget dans une compétition ouverte du nord de l'État de New-York tenue à Fort Henry. Il a terminé l'année en remportant les deuxième, troisième et quatrième places dans trois épreuves d'une compétition nord-américaine ouverte, à Lake Placid, N.Y. Gérard n'avait alors que huit ans.

L'année suivante, il réussissait à conserver son titre de champion ontarien et décrocha les honneurs aux épreuves nationales ouvertes pour devenir champion canadien chez les midget en se classant premier dans deux épreuves et quatrième dans une autre. De plus, dans ces dernières épreuves de championnat, il a remporté deux médailles d'or en établissant des records. Il a parcouru les 220 verges en un temps-record de 26.5 secondes, et les 440 verges en 54.9 secondes. Il a même abaissé son propre record peu après dans des épreuves à Red Deer, Alberta, en parcourant les 220 verges en 24.9 secondes.

Toujours chez les midget, en 1965, Gérard n'a cessé de recueillir les honneurs dans la classe des champions. En 1966, c'était encore la même chose. En mars de cette même année, il remportait trois médailles d'or et le trophée Dixon pour ses succès dans des courses de 220, 330 et 440 verges à Winnipeg. Dans la dernière épreuve de 440 verges, il a établi un autre record en parcourant la distance en 47.8 secondes.

Ses prouesses sur patin, au cours des années, ont valu à Gérard d'autres honneurs également. En 1964 et 1965, il était au rang des athlètes de la région d'Ottawa, honorés au gala annuel de l'Associated Canadian Travellers. Au cours des deux mêmes années, son nom paraissait à la liste des candidats aux trophées Julien et Daoust décernés annuellement aux athlètes canadiens-français les plus méritants de l'Ontario et de l'Ouest du Québec.

Pour le jeune Gérard, 1966 est sa dernière année de compétition dans la classe midget. L'an prochain, il passera au rang des juvéniles, et déjà il envisage le défi des années à venir dans sa carrière avec beaucoup d'optimisme et de confiance. En attendant, pendant ces mois d'été, il s'adonnera à son sport favori—après le patin, évidemment—le jeu de crosse. Et là encore il excelle dans ce sport qui connaît un regain de popularité dans notre région depuis déjà quelques années.

Grandfather's Mystery Solved

By LYONE BOULT*

It was raining, the ground was muddy and nearly everyone was disappointed that it was not a white Christmas.

My husband's grandmother, however, was not unhappy about it. It gave her an opportunity to repeat: "In my time . . ." and to describe what she called "real" winter and "real Christmas weather". She "remembered" the soft snow that "always" fell slowly in large sparkling flakes on Christmas eve, blanketing the fields, the houses and the horsedrawn carriages that trotted merrily towards the church for the midnight service.

It was a very poetic picture, but not an entirely true one. She chose to remember the occasional December 24 that was white and mild, blotting out from her memory the other more numerous rainy, cold, nasty Christmas Eves when the roads were flooded and too muddy to be passable.

No one ever challenged her. We let her cherish that beautiful Christmas Eve memory to the end of her days, even though we had found out the truth about Christmas weather for every December 24 "in her time", way back to the early 1880's, even before her marriage.

You see, every day grandfather had recorded in a diary what the weather was like, sometimes only in abbreviations after other entries for the day. "*Rain*", "*Rain*" "*Cold, roads all washed out and gutted after thaw*", "*Miserably damp and cold and stormy*", "*Rain*". The diary implacably was inscribed year after year for December 24. Then, one bright year—1907, to be exact—there

was this entry: "*Lovely Christmas Eve. Snow fell softly, mild, all went to midnight service and reveillon with family*".

For years we wondered what could have motivated such an intense and sustained interest in the weather that grandfather never missed even one day in recording what it was like, even if it was the only entry. He even recorded the weather for the few days back he had missed on the actual dates. It was mystifying, and nothing in grandmother's conversation gave a clue to his motive. She only remembered, very wisely, that the weather was so much nicer and seasonable in those days.

Then one short line among other more important items in our Department of Transport magazine *The DOT* gave us the answer: "One hundred years ago grammar school teachers were required by rule to record the weather every single day of the year".

We could now account for grandfather's apparent uncommon interest in the weather. He had been a schoolteacher and had recorded the weather not by choice, but because it was one of his routine duties. He had probably never mentioned it to his wife because he had never thought of it.

We are glad that grandfather did keep his diary—no matter what the reason—because we know with certainty that the weather in the "old days" was just as fickle as it is today and criticized just as much.

**Mrs. Boulton is a secretary on the Minister's staff.*

Ice Observers Spot Clues to Tragedy

When three ice observers from the meteorological branch went to work at Sydney, N.S., on February 23, 1966, it seemed a day like any other. A routine ice reconnaissance patrol in a DC-3 was their assignment.

But shortly before take-off Senior Ice Observer John Clarey and Ice Observers H. Jones and W. Webb had another job.

The 336-ton Grand Bank trawler Blue Mist II was missing and the Marine Ice Operations office at Sydney asked them to join in the search which, they were told, was already underway with no results.

The trawler, with 13 crew members aboard, radioed on February 18 that she was fighting heavy seas and would probably be late arriving at Grand Bank. She was never heard from again.

The DC-3 took off—on a direct route from Sydney to Cape St. George. One hour and two minutes later the radar screen picked up a target a few miles off track. The DC-3 swung around for a look. The men were disappointed. It wasn't the Blue Mist.

But then the break came. While swinging back on course, they noticed from 1,000 feet an object that looked like a white whale. The plane flew in closer. It was an overturned fishing dory.

Special precision navigation equipment carried aboard the ice reconnaissance aircraft pinpointed the exact position. This was radioed to the CCGS ALEXANDER and also to Goose Bay

Radio and the information was passed on to RCAF search and rescue. The DC-3 continued on its ice reconnaissance mission. But 28 minutes after the transmission of their message, RCAF search and rescue asked the observers to return to the overturned dory and hold until an RCAF Neptune scrambled from Greenwood, N.S.

Using the co-ordinates previously obtained, the DC-3 wheeled around. Only the precise navigation equipment made it possible to return to the exact spot and again keep the dory in sight. Closer inspection during the holding pattern revealed more debris. It was another dory broken up, a large seine net floating in the water, and smaller bits of wreckage. The DC-3 held its pattern until the RCAF search and rescue Neptune arrived. After the second pass sighted the floating debris the ice observers successfully marked all objects in the water. Then they diverted a nearby trawler to the spot. The men continued on their ice reconnaissance mission knowing that they had done all they could, and done it well.

In August 1959 ice observers in Churchill were requested to search for the overdue Norwegian motor vessel VINGNES. The ship was in distress when sighted from the aircraft. Extensive fire damage had severely damaged the rudder and rendered the navigational instruments useless. As a result of information passed by radio, the CCGS ERNEST LAPOINTE came to the rescue.

These examples have shown a dual value in having the precision navigation equipment so necessary to ice reconnaissance. They are very effective in emergency searches.

"RA" Day

The Ottawa Civil Service Recreational Association, best known as the "RA", celebrates its 25th anniversary this year. Special celebrations are planned for Saturday, July 9, when there will be open house all day at the RA Centre, tournaments, demonstrations, and a wind-up banquet and dance.

Although the RA facilities are available only locally, to Ottawa civil servants, it is the largest association of its kind in North America. In the last few years it has undertaken to provide recreation not only for active members, but for entire families of members and for retired civil servants.

The RA received its charter in 1941, but it was not until 1959 that the dreams of many Ottawa civil servants came true and a \$1,000,000 recreation centre, the Clarke Memorial Centre, was opened on Riverside Drive.

Two years after the opening of the main building, construction of additional outdoor facilities began. Two outdoor pools—one L-shaped, Olympic-size and a smaller 45 - foot - square pool for children—were completed. In 1965 a curling rink with six sheets of ice was added, as well as a new rifle range. As well, the grounds have been improved and several softball diamonds are located near the building.

The RA now operates about 50 activities at the Clarke Centre and is always adding new ones if there are enough people interested. Members pay fees for each activity in which they participate but, even though it is 25 years old, the RA still retains its 25 - cent - a - month membership fee.

The RA directors hope that all Ottawa civil servants will turn out on July 9 to help make the quarter-century anniversary celebrations an unqualified success.

L'Association récréative fête son 25^e anniversaire

L'Association récréative du service civil célèbre, cette année, son 25^e anniversaire d'existence. L'événement sera souligné avec éclat par des fêtes spéciales qui se dérouleront au Centre récréatif pendant toute la journée du 9 juillet prochain. Les fêtes seront couronnées par un banquet suivi d'une soirée dansante.

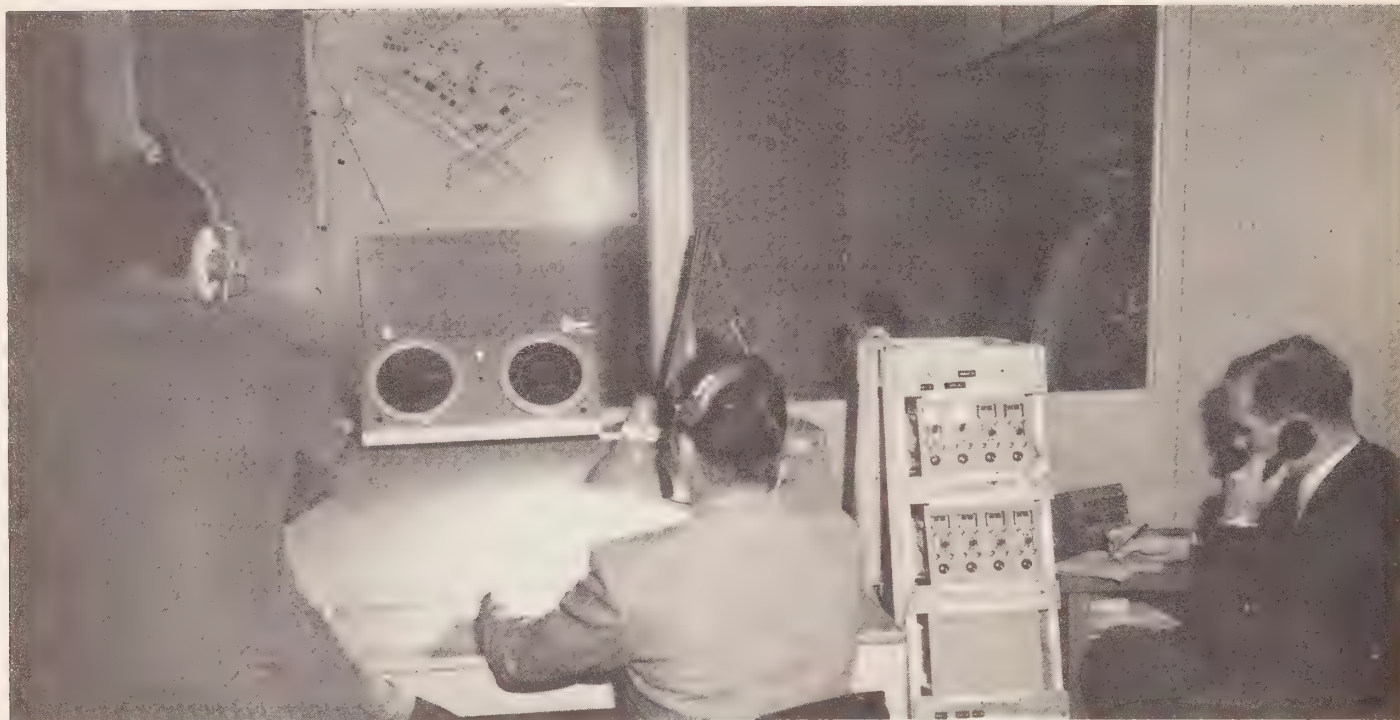
Bien que les services de l'Association ne soient accessibles qu'aux fonctionnaires de la région d'Ottawa, il s'agit tout de même de la plus vaste organisation du genre sur le continent nord-américain. Au cours des dernières années, l'Association s'est chargée d'organiser les loisirs non seulement de ses membres actifs, mais également des familles de ces derniers ainsi que des fonctionnaires à leur retraite. L'Association a obtenu sa charte en 1941, mais ce n'est qu'en 1959 que son rêve le plus cher s'est réalisé. C'est en effet à cette date que l'on a construit, au coût de \$1,000,000, le Centre Clarke Memorial, promenade Riverside.

Deux ans après l'ouverture de l'édifice principal sur l'emplacement du centre, on entreprenait la construction de deux piscines extérieures. L'une d'elles, aux dimensions olympiques, est construite en forme de "L". L'autre, pour les enfants, est d'environ 45 pieds carrés. En 1965, on a ajouté un curling à six glaces ainsi qu'un champ de tir. De plus, plusieurs terrains de balle molle ont été aménagés dans le voisinage immédiat de l'édifice.

L'Association compte une cinquantaine d'activités à son programme de loisirs au centre et elle est disposée à en ajouter d'autres au fur et à mesure que le besoin se fait sentir.

La direction de l'Association espère que les fonctionnaires de la région d'Ottawa assisteront nombreux aux fêtes du 9 juillet prochain afin d'en faire un succès sans précédent.

"Beaucoup sont appelés, mais peu sont élus"



Ces étudiants à l'entraînement transmettent à leurs confrères, dans une pièce voisine, les directives à l'aide desquelles on dirige des points lumineux représentant des avions sur une vaste carte murale qui fait voir un aéroport et ses approches.

«Beaucoup sont appelés, mais peu sont élus». Ces paroles de l'évangile pourraient fort bien s'appliquer au mode de recrutement des candidats aux cours des contrôleurs de la circulation aérienne, à l'École des services de l'air du ministère des Transports, à l'aéroport d'Uplands.

En effet, des quelque 250 postulants qui s'inscrivent au début de chaque série de cours, il n'en reste, à la fin, qu'une dizaine qui décrochent enfin leur certificat de compétence comme contrôleurs de la circulation aérienne.

Si le nombre de candidats reçus est aussi restreint, ce n'est tout de même pas dû à un simple caprice de la direction de l'école. C'est que le contrôle de la circulation aérienne, particulièrement de nos jours, est devenu en quelque sorte une question «de vie ou de mort». On ne peut donc accepter dans les rangs d'un tel service que le personnel le plus compétent qui soit.

Le rôle principal du contrôleur de la circulation aérienne consiste à assurer, en toute sûreté, le décollage et l'atterrissage des avions. A ce titre, il doit tenir compte d'une foule de facteurs, dont, en particulier, la vitesse des vents, leur direction, le genre d'appareil à diriger, sa destination, son point de départ, le nombre d'appareils en circulation à ce moment précis, leur altitude, et que sais-je encore.

Assis au tableau de contrôle, avec son écouteur, face aux écrans de radar et autres installations électroniques qui clignotent et émettent des sons de toutes sortes, le contrôleur doit conserver une excellente maîtrise de lui-même pour adresser calmement au pilote les directives qu'il attend au décollage ou pour diriger son appareil vers la piste d'atterrissage. La moindre erreur de calcul ou de jugement pourrait entraîner la pire catastrophe.

En cette ère de l'automation, où la technologie et l'électronique sont si hautement spécialisées, la main-d'œuvre nécessaire pour assurer le bon fonctionnement des appareils nouveaux doit être

aussi spécialisée. C'est précisément dans le but de former cette main-d'œuvre qualifiée que le ministère des Transports, en 1959, a ouvert son École des services de l'air, où l'on entraîne non seulement des contrôleurs de la circulation, mais également des opérateurs de radio, des techniciens en électronique, des inspecteurs de radio et des techniciens en météorologie.

Les cours au contrôle de la circulation aérienne sont d'une durée de vingt semaines. Les étudiants, des diplômés d'écoles secondaires, viennent de tous les coins du pays. La moitié de leur période d'entraînement est passée en classes, où ils acquièrent toutes les notions de base utiles à leur carrière qu'ils ont choisie. Puis, ils passent à la pratique dans des laboratoires où sont installés divers appareils électroniques à l'aide desquels on simule toutes les opérations d'atterrissage et de décollage. C'est là que l'étudiant met à l'épreuve ses connaissances du métier. C'est également durant cette phase de l'entraînement qu'on est en mesure d'écarter ceux qui n'ont pas les aptitudes nécessaires pour bien remplir les fonctions qu'on aura à leur confier plus tard. Vient ensuite la période d'apprentissage proprement dite où le candidat heureux est enfin admis à la tour de contrôle pour un stage de trois mois. Mais ici, il n'y a plus rien à simuler... C'est pour le vrai, cette fois. Lorsqu'il aura enfin passé cette phase, il sera prêt à assumer pleinement son rôle.

L'école est dirigée par Art Johnson, un ancien pilote de guerre, qui a lui-même agi comme contrôleur de la circulation aérienne pendant plusieurs années avant de s'adonner à la formation du personnel. M. Johnson estime qu'il se crée une cinquantaine de vacances par année au sein du personnel du contrôle de la circulation. Ces cadres doivent être remplis, et, même si «peu sont élus», il faut s'assurer que les plus compétents y ont trouvé leur place.

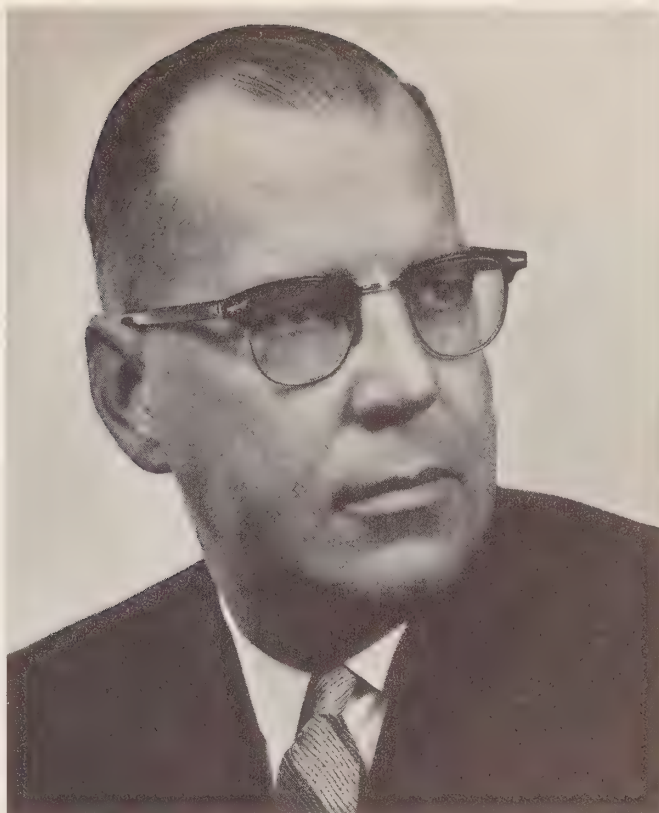
Appointed Director of New Maritimes Region

F. M. Weston who has been district marine agent at the Dartmouth Marine Agency since September, 1962, was appointed as regional director, Maritimes Region, in March.

Mr. Weston's appointment was made as the first step in the forthcoming development of a new regional management organization within marine services. His immediate task will entail the organization of the region, which, when established, will provide the guide-lines along which four additional regions will be set up across Canada in a phased program. These regions will encompass 11 district marine agencies and some 15 other marine services field offices that in the past have been reporting individually to branch directors or to the assistant deputy minister, marine.

The new simplified management structure has been contemplated for several years past, but its implementation has been delayed until the present so that development of the new organization could take into account any decisions made in relation to the recommendations of the Glassco Commission Report and the more recent Urwick-Currie Report to the Department of Transport on financial management.

Establishment of a regional management organization will provide the department with more efficient means of matching resources to workloads. The old marine agency boundaries were set up many years ago along natural geographical lines that, to a large degree, bear little relation to the operational areas as they now exist, particularly in regard to the relationship between present-day communications facilities and areas of operation.



When organized, the new Maritimes Region will include the marine agency districts of Dartmouth, Charlottetown, P.E.I. and Saint John, N.B., Mr. Weston will continue to have his headquarters in Dartmouth.

It is planned to appoint a director for each of the new regions. These, apart from the Maritimes Region will be: Newfoundland Region; Laurentian Region, (including Quebec, Hudson Bay and Eastern Arctic waters); Lakes Region, (including Ontario and Manitoba inland waters), and western Region, (including the Pacific Coast, western and northwestern Canadian waterways and the western Arctic).

The Western Region is scheduled for establishment next, in about a year. It is hoped to have all regions organized within three years, as suitably trained and experienced staff becomes available.

Safety

We Believe . . . that every man bears the unalterable responsibility for keeping out of harm's way. This he owes to himself, his family, his fellows and his job.

. . . that no man lives or works entirely alone. He is involved with all men, touched by their accomplishments, marked by their failures. If he fails the man beside him, he fails himself, and will share the burden of that loss. The true horror of an accident is the realization that a man has failed himself—and more—that his fellows have failed him.

. . . that accidents are conceived in improper attitudes, and born in moments of action without thought. They will cease to be only when the proper attitude is strong enough to precede the act—

when the right attitude creates the awareness that controls the act.

. . . that the prevention of accidents is an objective which crosses all levels of rank, organization and procedure.

. . . that freedom from harm is not a privilege but a goal to be achieved and perpetuated day by day.

. . . that the elimination of injury and pain through accidents is a moral obligation upon which the final measure of our performance directly depends.

—American Society of Safety Engineers.

Reprinted from a pamphlet issued by the Industrial Accident Prevention Association February, 1966.

Montrealer Earns Highest D.O.T. Suggestion Award

Joseph E. H. Courtemanche, an electronics technician at Montreal International Airport, has earned \$520, the highest suggestion award to date made to an air services employee. He was presented with a cheque and certificate on Friday, April 29, by Mr. M. Baribeau, regional director of air services at Montreal.

Mr. Courtemanche, who has been with the department for just a year, prepared a maintenance manual for an electronic equipment unit that resulted in improved efficiency and in cost savings of nearly \$6,000.

A native of Montreal, Mr. Courtemanche attended D'Arcy McGee High School. In 1948 he joined the RCAF and after five years of service left to work for industry, in the Montreal area and in the Northern United States. In January, 1965, he joined the Department of Transport.

Another winner H. O. Miller, a fire officer at Vancouver International Airport, received a \$50 award for recommending that airport fire instruction reports be submitted annually rather than semi-annually. This is now being done with considerable savings in time and material.



Other Suggestion Award Winners

NAME	POSITION	LOCATION	AMOUNT
J. O. Clements	air traffic controller	Port Hardy, B.C.	\$10
J. G. Graham	technician, electronics	Abbotsford, B.C.	\$30
G. R. Holloway	radio operator	Fort William, Ont.	\$10
S. P. Hyde	technician, electronics	Stirling, Ont.	\$30
L. S. Kayser	radio operator	Nakina, Ont.	\$10
J. R. McCracken	radio operator	Fredericton, N.B.	\$10
S. J. Nellor	radio inspector	Victoria, B.C.	\$10
F. J. Phillips	technician, meteorological	Windsor, Ont.	\$10
Miss Muriel Rogers	stenographer	Toronto, Ont.	\$10
C. J. Schneider	technical officer	Saskatoon, Sask.	\$15
R. E. Stiles	radio operator	Ucluelet, B.C.	\$15
N. A. Winsor	technician, electronics	Frobisher, N.W.T.	\$30

Cross-Canada Dateline

Toronto—When Dr. P. D. McTaggart-Cowan resigned as director of the meteorological branch to become president of Simon Fraser University at Burnaby, B.C. his friends and associates endowed an award bearing his name at the new university.

Recently it was announced that the first recipient of the award is Peter Vitins of Vancouver, B.C. Mr. Vitins, one of the top four students at Simon Fraser University in the 1965 fall term, had an "A" average in a full five - course program in science. His particular interest is chemistry and he organized and was the first president of the university's Chemistry Club.



Saint John, N.B.—Seems that Captain Edward Ormsby, district marine agent at Saint John, N.B., may hold something of a record in Red Cross blood donations. A former naval captain, he recently made his 67th lifetime donation. The Red Cross knows of no one with more donations to their credit in that area.

Gander, Nfld.—The welcome extended Queen Elizabeth and Prince Philip at Gander International Airport on February 1 far exceeded expectations. The unofficial one hour stop by Her Majesty marked the first time a giant VC-10 aircraft had landed in Canada.

Some 4,000 cheering citizens and school children of Gander and from towns as far away as Grand Falls, flocked to the airport to see the royal party. Premier J. R. Smallwood, a member of the welcoming party, said: "It was the most impressive welcome given Her Majesty in Newfoundland."

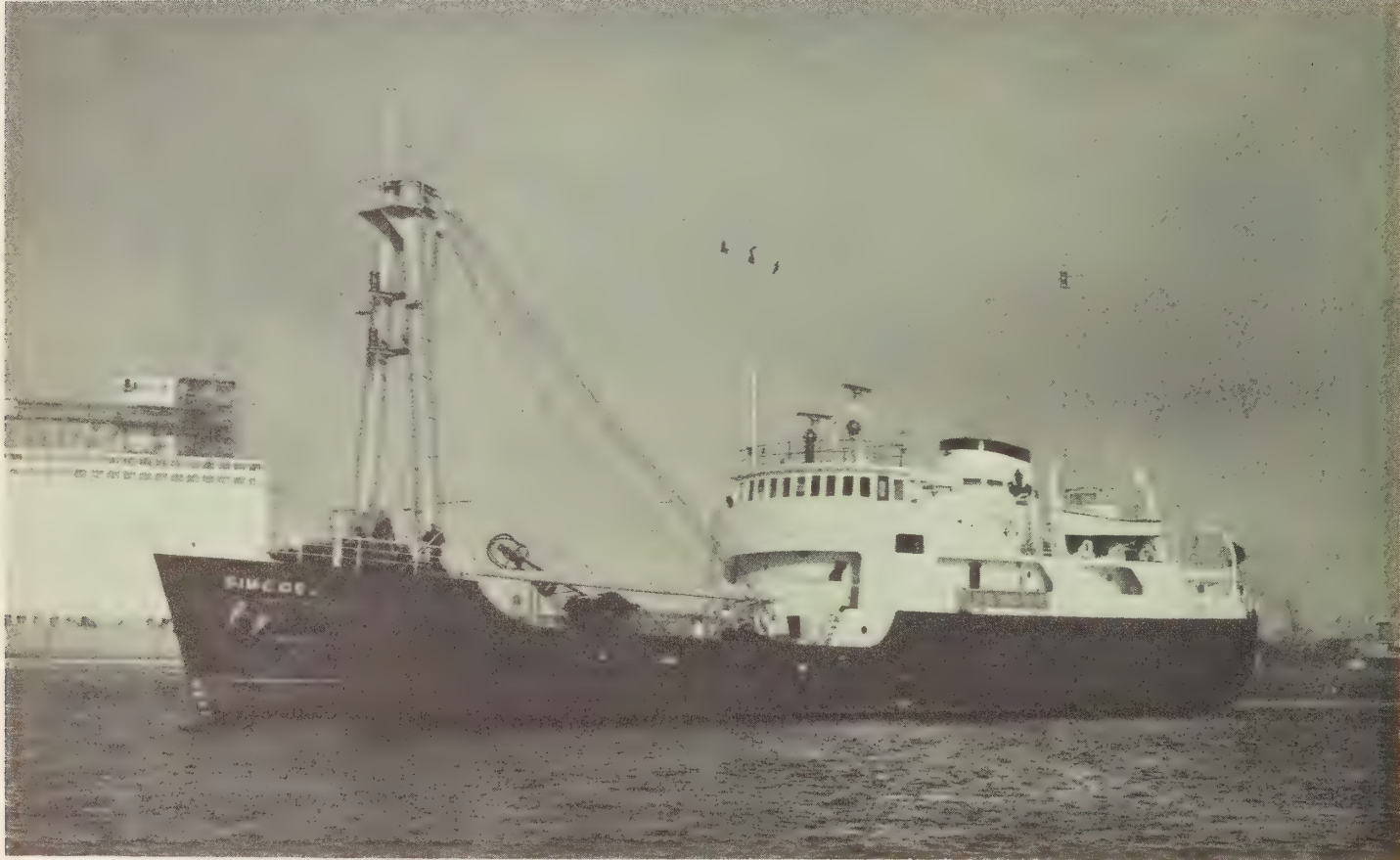
An editorial in the Gander Daily News said: "The most outstanding feature of the royal tour through the terminal was the way in which students were arranged so that each child stood in the front ranks. We can only add our appreciation for the excellent arrangements made by the airport manager and his colleagues. Some very careful planning went into the project and every effort was made to make it as convenient as possible for all concerned. Further, all through the royal tour there was close supervision both by the R.C.M.P. and employees of D.O.T., which maintained order, and at the time avoided unpleasanties. Never have we seen such a well-ordered event."

Left to Right: Magistrate Jack White, behind Lieutenant Governor Fabian O'Dea, Captain Ambrose Shea, Her Majesty, Mrs. White, Mrs. Jack James, Airport Manager Jack James, Premier Smallwood's daughter, Mrs. Edward Russel and Premier Smallwood.



Captain Ormsby gives 67th pint of blood.

Canadian Coast Guard ALBUM



CCGS SIMCOE, an icebreaking lighthouse supply and buoy vessel, was launched at the yard of Canadian Vickers Limited, Montreal, on July 26, 1962. She has since served in the upper St. Lawrence River and lower Great Lakes. She is based at the Department of Transport district marine agency at Prescott, Ontario.

CCGS SIMCOE

LENGTH: 179 feet, six inches

BREADTH: 38 feet

DRAFT: 12 feet

POWER: Diesel-electric; two Ruston-Paximan diesel engines with Canadian General Electric propulsion generators, developing a total of 2,000 shaft horsepower.

T61

*and
Longport High
School, Canada*

the **dot**

july/august 1966



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COVER

CCGS "VANCOUVER"—seen here under way is the new weather-oceanographic vessel, one of the finest of her kind in the world, which was accepted from the builders on July 4 by Gordon W. Stead, assistant deputy minister, marine, on behalf of the Department of Transport. A sister ship, CCGS "Quadra", was launched at the same ceremony.

Editor Yvonne McWilliam
Rédacteur français Edouard Deslauriers

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ROGER DUHAMEL F.R.S.C., QUEEN'S PRINTER AND
CONTROLLER OF STATIONERY, OTTAWA, 1966

ROGER DUHAMEL M.S.R.C., IMPRIMEUR DE LA REINE
ET CONTRÔLEUR DE LA PAPETERIE, OTTAWA, 1966

Tradex Investment Fund

In the March/April issue of the DOT we ran an item about Tradex Investment Fund, and the fact that eligibility to purchase shares was being extended to D.O.T. employees.

According to the fund's board of directors many DOT'ers from across Canada and from several points abroad have expressed interest. However, unknown to "the DOT" at the time of writing the original piece, Tradex is not authorized to solicit membership from Canadian points outside of Ontario. They regret therefore that they are unable to reply to the many enquiries from addresses in the other nine provinces and in the Yukon and Northwest Territories. Replies are being sent to all interested people in Ontario and outside of Canada.

People from provinces outside of Ontario who are interested in Tradex are free, however, to contact the Tradex Investment Fund personally if and when they are in Ottawa.



In a ceremony at Ottawa International Airport, Mr. Pickersgill (centre) accepts the Sikorsky S-61N from Mr. T. E. Stephenson (right) President, United Aircraft of Canada Limited, while A. H. G. Storrs (left) D.O.T.'s director of marine operations stands by.

D.O.T. takes delivery of Canada's Largest Civil Helicopter

Early in May Transport Minister Pickersgill accepted delivery of Canada's largest helicopter in civil use.

The \$1,350,000 Sikorsky S-61N is an amphibious, twin-turbine craft. It will be based at Prince Rupert, B.C. and will serve the entire coastal area from Alaska to Port Hardy, on the northern tip of Vancouver Island. Routine duties will include resupply of 13 lighthouses and maintenance of hundreds of unmanned lights and other navigational aids. It also will be available for search and rescue operations.

The new craft replaces a single-engined helicopter which has been in service in the area for four years. The twin-engined craft was considered necessary for safe operations, since pilots must regularly fly more than 150 miles over the open Pacific in an area of particularly bad weather while performing routine services.

The helicopter has a range of approximately 500 miles without refuelling and a top speed of 150 miles per hour. It has seating for 26 passengers and a gross weight of 19,000 pounds. A sling under the carriage for heavy equipment will carry up to 5,000 pounds. A rescue hoist with a capacity of 600 pounds also will be installed.

The department now has 21 helicopters serving in marine agencies and aboard Canadian Coast Guard icebreakers. Four are based on the east coast, three on the west coast, and the remainder serve the Quebec marine agency and the eastern Arctic. It also operates two helicopters for hydrographic work by the Department of Mines and Technical Surveys.

The new helicopter was supplied by United Aircraft of Canada Limited.



Policy Making—R. H. Bradley, chief of the centre, and some of the professional staff discuss agenda for forthcoming meeting with air carrier officials. Left to right: Tom Lewis, Chuck Coleman, Mr. Bradley, Velma Rust and Murray McRae.

D.O.T. Air Statistics Group moves over to DBS

New Government Aviation Statistics Centre

On April 1 a new aviation statistics centre of the Dominion Bureau of Statistics was created within D.O.T. to produce statistics for the department, the Air Transport Board and the Bureau and to assume general responsibility for the production and development of aviation statistics.

The creation of the DBS satellite unit within Transport to meet the requirements of all government agencies for aviation statistics is a new approach to statistics within government. The idea is to put the statistics gathering unit closer to its primary users so that special services can be provided quickly.

An interdepartmental policy committee with representatives of D.O.T., A.T.B. and D.B.S. has been established. It will lay out the priorities, coordinate the requirements of all three agencies and, in general, assist in the successful operation of the centre.

The centre will provide special services needed for the planning and development of Canada's airports, air routes and airline services. The centre is currently organized on the basis of the following units:

- *aircraft movement statistics*—collecting information from airports and air traffic control facilities and providing statistics to D.O.T.
- *air carrier statistics*—oriented to the collection of information from air carriers and to the provision of special statistical services to the Air Transport Board.
- *central coordination and analysis*—developing of a master plan of the statistical program of the centre and providing central services required by the centre as a whole.
- *operations unit*—providing technical and clerical services associated with the production of regular and ad hoc statistics produced almost entirely by computer.

It is planned to add a unit responsible for all ancillary statistical areas of aviation not now covered. This would include a regular report on business, private and specialty flying (general aviation) and the provision of aircraft and accident statistics nationally and regionally.

The centre was expected to physically remain in D.O.T. headquarters, but for reasons of space it has been located in the Kent/Albert Building a few blocks west of the Hunter Building, and the same distance south of Number 3 temporary building, which houses most of Ottawa air services. When a new D.O.T. building is completed early in the 1970's, it is expected the centre will be housed within D.O.T. again, as will the Air Transport Board.

Because it is a statistical service unit within D.O.T., the centre operates as far as possible as if it were an integral part of D.O.T. It keeps D.O.T. working hours, and uses D.O.T.'s data processing facilities and other office services.

Headed by R. H. Bradley, the centre's staff presently numbers 19—Mr. Bradley, six statisticians, an administrative officer and 11 clerical, stenographic and typing members.

This, however, is soon due to change. Treasury Board has approved the addition of 23 more positions, including 13 statisticians, 10 technical officers and a computer systems programmer.

All of these positions must be filled in order to carry out the immediate workload of the centre, although it is envisioned that new projects and programs will be embarked upon.

Mr. Bradley is an Ottawa native. He attended Queen's University, Kingston, Ontario graduating with a B.A. in 1946. He then completed a course at the Ontario College of Education



Airport Statistics—John Charters and Jan Bekooy look at aeronautical route charts while they discuss reporting problems at small airports.

and accepted a position teaching at Port Arthur Technical and Commercial Highschool. In 1952 he gave up teaching to join the government doing research on prices with the economics division of the Department of Agriculture. It was here that he uncovered his aptitude for and liking of statistical work and has remained with it since.

In 1954 he switched to the Dominion Bureau of Statistics, where he engaged in research on the consumer price index. He then moved to the public finance and transportation division where he in turn headed the rail and road unit, and the water, air, public utilities and communications unit. With experience in all aspects of transportation statistics, he then became chief of the research projects section, public finance and transportation.

In 1961 he transferred to the Department of Transport as head of the statistical section of economics, air,—the forerunner of the newly-created Aviation Statistics Centre.

The work of the centre's individual statisticians will include planning surveys, conducting analytical studies and related research into concepts, definitions, problems of comparability, analytical and operational methodology.

In addition to statistics produced on a regular basis, the section has always produced statistics for special studies. For instance, in the first nine months of 1965, prior to the unit's transfer to DBS, there were 29 requests for specific kinds of information. The amount of time spent on these varied from one hour to three months.

In 1964 a project requiring the team-work of the section and the data processing unit had most satisfactory results. It concerned analysis of trans-border origin and destination data to ascertain the traffic volumes which might be engendered by specific routes for use in negotiating the recently announced Canada-United States bilateral agreement on air routes.

Both Canada and the United States (through the Bureau of Accounts and Statistics of the Civil Aeronautics Board) compiled two sets of statistics. Each group prepared statistics for functions peculiar to their own country and then another set with information common to both surveys. At the actual bilateral talks preceding the negotiation of the agreement it was decided to use the figures prepared by the Canadians because they proved more comprehensive and more valuable to both parties.



Civil Aviation Statistics—Grace Eades, June Forgie and Helen Forsyth check monthly report. This work was transferred to the centre from the Dominion Bureau of Statistics in April.



Air Passenger Origin and Destination Statistics—Mary Donovan analyzes joint U.S.-Canada transborder O & D Statistics, while Paul Lampkin, statistician, brings data from IBM 360 computer. Paul's earlier experience as air traffic controller at Toronto makes him valuable addition to staff.

Après plus de 100 ans le creusage se poursuit



Un technicien note les données de vitesse d'écoulement de l'eau à l'aide d'un moulinet hydrométrique installé dans le cours d'eau du modèle hydraulique de Ville La Salle.

par Edouard Deslauriers

Depuis plus de cent ans déjà, on drague, dévase, approfondit et élargit par tous les moyens possibles le chenal maritime du Saint-Laurent. Ces travaux, dont les débuts remontent à 1844, se sont poursuivis sans relâche depuis lors. Ils ont même été intensifiés depuis l'aménagement de la Voie maritime du Saint-Laurent qui a entraîné l'acheminement de navires plus nombreux et plus gros vers le port de Montréal.

En 1844, le chenal maritime, section du fleuve qui s'étend depuis Les Escoumins jusqu'à Montréal, soit une distance d'environ 300 milles, n'avait en plusieurs endroits qu'une profondeur de 10½ pieds. La largeur moyenne du chenal s'établissait à 150 pieds. Aujourd'hui, le chenal a une largeur moyenne de 800 pieds, à l'exception du parcours dans le lac Saint-Pierre et du secteur s'étendant entre Verchères et Montréal. On est actuellement en train d'élargir cette dernière partie du chenal. De son côté, la profondeur atteint un minimum de 35 pieds. Ces travaux dans le Saint-Laurent ont déjà coûté au pays plus de \$150 millions.

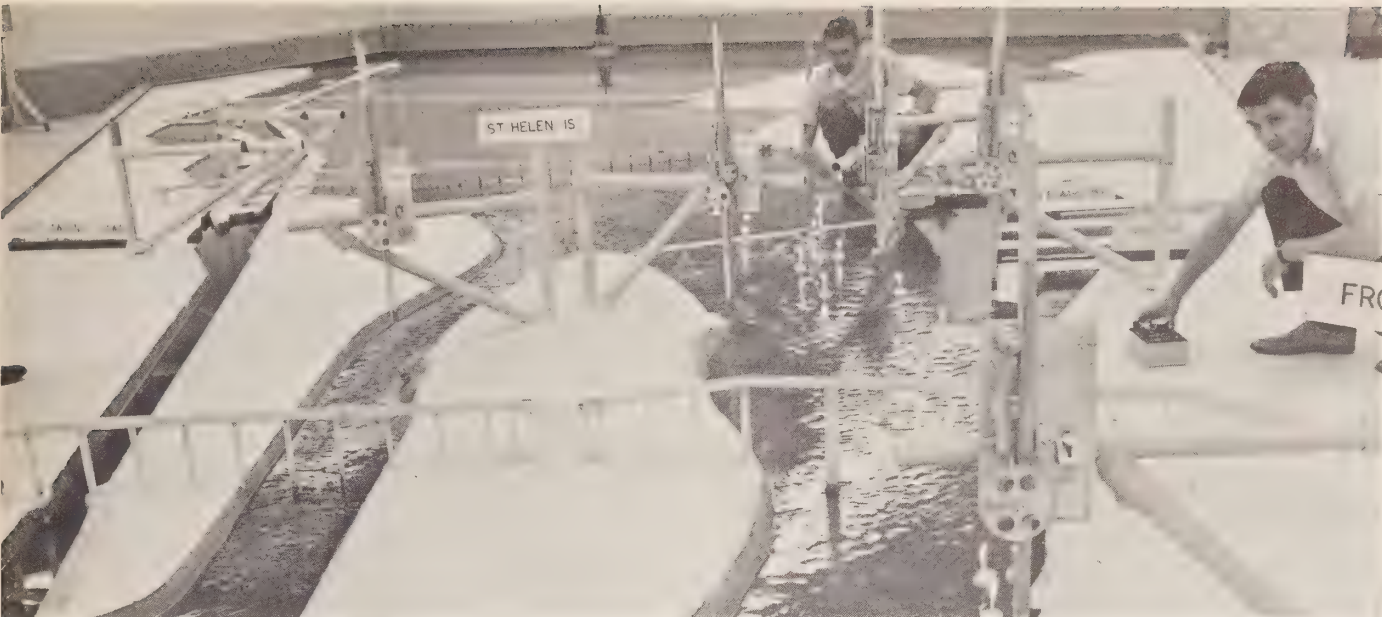
Doit-on conclure que le chenal a maintenant atteint sa profondeur maximum? Certes non, puisque les ingénieurs du ministère des Transports, à Ottawa, à leur bureau de Montréal et au laboratoire de Ville LaSalle, étudient présentement la possibilité d'approfondir le chenal à 39 pieds. Selon M. John Sylvester, responsable de la section des enquêtes techniques sur place ayant trait aux travaux dans le chenal maritime, le but des études est d'en arriver d'abord à établir le niveau à 39 pieds et à le maintenir ainsi la plupart du temps, quitte à encaisser un minimum de 35 pieds durant les périodes de faible débit. «Une telle situation, dit-il, nous permettrait de combler les besoins de l'heure dans le domaine de la navigation.»

Historique du chenal maritime

Jacques Cartier, un des premiers à naviguer le Saint-Laurent, avait déjà noté, dans des rapports à ses supérieurs, que les bas-fonds du lac Saint-Pierre empêcheraient les plus gros navires de filer vers l'ouest. Pourtant, pendant trois siècles après cette découverte, rien n'a été fait pour améliorer la navigation entre Québec et Montréal. Les plus gros navires devaient s'arrêter à Québec. Pour le reste du trajet, on transférait la marchandise sur des embarcations plus légères. C'était une entreprise profitable pour certains, de là l'opposition à tout projet d'approfondissement du chenal. Québec était le port d'entrée officiel du Canada, et il contrôlait le port de Montréal. On rapporte qu'en 1824, seulement 55 des 613 navires empruntant le fleuve Saint-Laurent se sont aventurés jusqu'à Montréal.

En 1805, une législation provinciale proposait l'amélioration de la voie navigable entre Québec et Montréal. Cette amélioration projetée s'est limitée, semble-t-il, à l'installation de quelques phares ici et là dans le fleuve.

Ce n'est enfin qu'en 1844 que des mesures sérieuses et concrètes étaient finalement adoptées. On commença alors à ouvrir un chenal en ligne droite à travers le bas-fond du lac Saint-Pierre.



Aperçu d'une section du modèle hydraulique, où des flotteurs lumineux sont utilisés pour aider à déterminer la vitesse du courant près de l'île Sainte-Hélène. Un technicien, à droite, enregistre les vitesses à l'aide d'un chronomètre.

Le but était de creuser un chenal de 14 pieds de profondeur. En 1847, le projet était abandonné. On décida, pour des raisons d'économie, d'approfondir et d'élargir plutôt le chenal actuel qui franchit en zigzaguant le lac Saint-Pierre.

D'année en année, la circulation dans le fleuve Saint-Laurent devient de plus en plus dense. Pour faire face à ce trafic grandissant, un service spécial du ministère des Transports est chargé des recherches et des travaux qui ont pour but de maintenir le chenal ouvert à la circulation et d'assurer, en toute sécurité, le passage des navires.

L'ingénieur en chef responsable de l'équipe s'adonnant aux recherches et aux travaux dans le chenal est M. Herbert L. Land. Il est secondé dans ses fonctions par M. Maurice-G. Boudreau qui est chargé des opérations et de l'entretien, et par M. John Sylvester, responsable des enquêtes techniques sur place.

Le service chargé des travaux dans le chenal maritime a quatre navires spéciaux à sa disposition, soit le *Detector*, le *Frontenac*, le *Beauport* et le *Ville-Marie*. Cinq péniches de débarquement sont également en usage ainsi que le brise-glace *Ernest Lapointe*, dont les services sont parfois requis. Le *Frontenac* sera remplacé, prochainement par le *Nicolet*, dont la construction vient d'être achevée.

Ces navires sont équipés de l'outillage le plus moderne permettant de déceler toute entrave à la navigation dans le chenal maritime. Les instruments qu'on utilise permettent de faire un sondage complet du lit de la rivière. On est ainsi en mesure de déterminer la qualité du sol ainsi que la position exacte et la hauteur de tout obstacle découvert au fond du chenal.

Les ingénieurs du ministère sont constamment en quête de moyens de garder le chenal maritime ouvert au passage des gros navires sans entraîner une baisse du niveau de l'eau dans le port de Montréal. C'est là, semble-t-il, une des grandes difficultés à surmonter. Il est évident que le dragage qui permet d'approfondir le lit de la rivière dans un endroit doit provoquer une baisse du niveau de l'eau ailleurs. Cette situation incite les ingénieurs à étudier divers projets, dont l'un serait la construction d'un barrage et l'aménagement d'écluses pour assurer le passage des navires.

Le modèle hydraulique du chenal maritime

Un des principaux outils du ministère dans son travail de recherches sur le comportement du fleuve est le modèle hydrau-

lique de Ville LaSalle. Ce modèle, reproduction à l'échelle du Saint-Laurent, englobe le parcours s'étendant entre Montréal et Bécancour, soit une distance de 88 milles.

Le modèle, construit il y a quelques années au coût d'environ un million de dollars, a une longueur totale de 800 pieds. L'outillage qu'il renferme permet de reproduire, à l'échelle, toutes les situations qui existent dans le chenal maritime lui-même. La division des études hydrauliques au laboratoire de Ville LaSalle est dirigée par M. R. H. Smith. L'ingénieur sur place est M. Charles Laurie.

Pendant deux ans, les ingénieurs du ministère ont recueilli les données qui ont servi à la construction du modèle. Il fallait des détails précis sur la forme et la profondeur du lit de la rivière, sur la position exacte des îles et sur les constructions érigées le long du parcours. Il fallait également effectuer des sondages et recueillir des données sur les niveaux de l'eau et la vélocité du courant.

Aujourd'hui, à l'aide de ce modèle on est en mesure d'étudier le comportement de la rivière sous tous ses aspects et dans toutes sortes de conditions.

Le modèle a servi aux études sur l'aménagement initial du terrain de l'Expo 67, sur le tunnel de Boucherville et sur les effets de la fermeture de divers chenaux. D'autres études ont révélé la nécessité d'apporter des modifications au barrage régulateur projeté dans le chenal au nord de l'île Bouchard, près de Saint-Sulpice. Ce projet ainsi que d'autres ouvrages régulateurs dans la région pourraient probablement hausser de 2½ à 3 pieds le niveau des basses eaux dans le port de Montréal.

Toujours à l'aide du modèle, on a étudié la possibilité d'élargir le chenal à 800 pieds de Verchères au quai de la Canada Cement, à Montréal. Ces études ont démontré que l'élargissement entraînerait une baisse du niveau de l'eau dans le port de Montréal. On s'est rendu compte cependant qu'en déposant les déblais en certains endroits stratégiques, on pouvait rétablir le niveau dans le port et même l'élever à un niveau supérieur.

Ainsi donc, les travaux dans le chenal maritime du Saint-Laurent se poursuivent déjà depuis plus de 100 ans, et rien ne laisse entrevoir leur fin prochaine. Face au progrès que connaît présentement la navigation nos ingénieurs semblent plutôt avoir du pain sur la planche pour au moins 100 ans encore à venir.



Assignment- TRINIDAD

An acute shortage of weather forecasters at Trinidad's Piarco Airport is now over thanks to D.O.T.'s meteorological branch and India-born Canadian meteorologist Arvini Jivanhal Shah.

For some time before 1963 the government meteorological office at the country's main airport needed staff with basic training, capable of taking and transcribing readings. The office which serves eight international airlines, had been forced to replace written weather forecasts by verbal reports when their regular but slim staff of four forecasters and seven meteorological assistants had been reduced by two.

Through Canada's External Aid office the Trinidadian Public Service Commission asked that a meteorologist be loaned to it for a two-year period. They needed an expert to train new forecasters and meteorological technicians, to overhaul, revise and streamline the weather office's operational duties and to survey the instruments and office equipment and make recommendations.

Mr. Shah (pronounced Shaw) was selected for the job. To most, a posting abroad—north, east, south or west—would be a

novel experience. But not so for Mr. Shah. To him, travel is second nature. In fact, the novelty would be if and when he spends five or 10 years in one place.

Graduating from the University of Bombay with a B.Sc. degree in chemistry and physics, he later attended the University of California at Los Angeles, finishing in 1952 with an A.B. degree in meteorology. He then joined United Airlines in San Francisco as a staff meteorologist. In 1954 he gave up his job and left the States to tour Europe. After the tour he joined the British Colonial Office's overseas civil service as a meteorologist and was posted to Jamaica for three years.

He found that particular posting rewarding. The biggest prize by far, however, was a local nurse whom he married. When his three years in Jamaica were up, accumulated leave credits allowed him and the new Mrs. Shah time to fly to India to visit his family. In the meantime he had applied to Canada's Department of Transport to see if a vacancy existed in the meteorological branch. One did. It was offered and he accepted.

In June, 1958 the Shah's came to Canada and after a three-month training stint were posted to, of all places, Churchill, Manitoba. From the endless sunny days of Jamaica to the almost endless winter days of Canada's North must have been quite a change, but the Shah's thoroughly enjoyed the 2½ year posting. While Mr. Shah looked after the weather, Mrs. Shah continued nursing.

In 1961, it was on to the weather office at Montreal International Airport and then, in October of 1963, came the posting to Trinidad.

Returning to Canada this past April, Mr. Shah can look back on many accomplishments. From the moment he arrived in Port-of-Spain, the capital of Trinidad, he found plenty to do. To increase the inflow of basic weather data, he established contact with various agencies requesting additional weather data covering an area 800 miles to the east, 200 miles to the west, 300 to the north and south and across Trinidad. He investigated the efficiency of the meteorological instruments and recommended improvements, supervised the operational staff and helped out with shift work to ease the pressure created by staff shortage.

Within six months of his arrival Hurricane Cleo posed a serious threat to neighbouring islands. Luckily Mr. Shah was there. He was the only hurricane forecaster available since the divisional assistant director was away at the time. He worked around the clock until the hurricane was out of Trinidad's area of responsibility.

The primary purpose of the 2½ year assignment, however, began within a few months of his arrival when he set up the first training program for meteorological assistants. The first two-month class was attended by three recruits. The second, by 11. All 14 graduates with the exception of one are now on the Piarco weather office staff.

In January, 1965 Mr. Shah began a 14-month course for forecasters. Seven Trinidadians were given basic courses in physics, mathematics, elementary meteorology, dynamics, atmospheric thermo dynamics, synoptic meteorology, and operational meteorology. After a few months of on-the-job training the seven were able to undertake full responsibility of duty forecasters.

Mr. Kamaluddin Mohammed, Trinidad's minister of public utilities, described the courses as first class, and praised Canada for affording the technological assistance.

As for Mr. Shah, he was well satisfied with the graduates and their examination results. He enjoyed his posting to the lovely Caribbean islands, but was pleased to be back "home" in Canada. He is now with the weather office at Toronto International Airport.



A Rest Pause—as the men drag the iceboats across ice on P.E.I.-Mainland mail and passenger service at the turn of the century.

As long ago as 150 years an "almost daily" mail route existed between P.E.I. and Nova Scotia. This is an account of how, even during the most frozen winter months, . . .

The Mail Went Through

by S. A. Coyle*

Today's visitors to Prince Edward Island go by air or boat over Northumberland Strait, which separates the Island from New Brunswick and Nova Scotia, on one of the modern train and automobile ferries.

However, in the early days of what was then a colony, the mode of travel was not so convenient. In summer travel was by sailboat or canoe and was comparatively trouble free but when winter came and the Strait filled with ice it was a different story.

The records show that prior to 1775 the colony was quite isolated in winter. In that year Governor Patterson who wished to find a way to send dispatches to England on a more or less regular basis persuaded some of the residents to attempt a passage from Wood Island over the ice to Pictou N.S. Since canoes were the only craft available at this time for the trip very few crossings were possible.

From 1775 until 1827 nothing in the way of records is available, but in the latter year an agreement was made between the Island

government and the people of Cape Traverse, giving these people an exclusive right to transport mails on a route between Cape Traverse, P.E.I. and Cape Tormentine, N.B., a distance of nine miles. This route was much superior to the Wood Island-Pictou route, which was 23 miles. Many difficulties were encountered on this latter route, and sometimes several weeks would pass without a trip being made. On the new route, round trips were made each day, weather permitting.

\$2 Plus Help Haul

The boats used in this service were called "ice boats" and were small sturdy craft, sheathed with tin to withstand the constant contact with the ice. They were fitted with two iron shod runners for easier transport over ice and also had straps fastened to each side. Boat crews and men passengers looped these straps over

their shoulders and hauled the boats over the ice by this means. The straps were also a measure of safety should anyone fall through a hole in the ice. The fare was two dollars and help haul the boat, or four dollars and ride all the way.

The boats were dragged over the ice until a patch of open water was reached, then everyone jumped in and rowed until the next floe of ice.

These crossings were dangerous enough in good weather, but when storms arose while the boats were out on the ice the situation could become perilous. In this regard, the following item appeared in the *Royal Gazette* of 22nd March, 1831:

"The mails which were forwarded from here (Charlottetown) were detained until Saturday, when the courier and another person got over in a flat, somewhat larger than the ice boat. At three o'clock of the same day they left the opposite side (Cape Tormentine) on return, having a passenger with them, and had nearly all perished in the violent snow storm of that evening. To add to their distress, they lost their oars by a wave breaking over them, which nearly swept them all off. About seven o'clock Sunday morning, having drifted up to Egmont Bay (about thirty miles), they were observed from the shore, when three men put off to their assistance and relieved them from their perilous situation, almost dead with the cold and two of them frost-bitten. They brought three Halifax and two Cumberland mails which arrived at the Post Office about nine o'clock last evening. A number of newspapers were soaked with water, but the letters in general escaped damage."

"Lolly" Danger

Sometimes on these crossings the boats encountered what was known as "lolly"—a stretch of water filled with snow or finely ground ice. It was almost impossible to get through this, and so such places were avoided. However, if a detour involved a long distance, these patches could sometimes be crossed by putting

one boat ahead and placing another against the stern of the first, thus pushing it ahead; then another boat, and so on. These boats were tied together stern to bow, and thus a bridge was formed over the lolly and the crossings could be made.

Another incident such as the one mentioned in the *Royal Gazette* report occurred in 1843 when ten persons spent two days and a night out on the ice, due to a blinding storm. Some of these persons were badly frost-bitten, but they finally got to the Island shore.

On March 10th, 1855, there were two students returning from Philadelphia as well as another man and dog as passengers on the trip from Cape Tormentine. When they were within one-half mile of the Island shore, a blinding snow storm set in. They continued to push on but were stopped by a large patch of lolly. The boats were turned over in an attempt to provide some shelter from the bitter cold and heavy gale. They remained on the ice for two days and three nights. As they had no food left, they finally had to kill and eat the dog which had accompanied them. They threw out the mail bags and baggage from the boats and attempted to reach the Nova Scotia coast near which they had drifted. They finally got ashore near Wallace, N.S., but one of the students had died before land was reached. The man who had owned the dog lost all his fingers and both feet from frost bite and did not survive long.

The last recorded accident occurred in 1885. On January 27 of that year three boats set out from Cape Traverse with 15 crew members and seven passengers. A storm soon arose and by noon the drift was so bad they could only see a few feet in front of them. Travelling was so dangerous they decided they must attempt to shelter for the night. They upended two of the boats gunwale to gunwale in order to make a sort of shelter and tore the tin sheathing from the third boat to make a pan for fire. They were forced to use newspapers from the mails for fuel as well as the oars from the third boat. After these had been used they were obliged to break up the boat and use the wood in an attempt to keep warm. The heat melted the snow and eventually their

The CGS Stanley cutting icebound vessels out near Bridgewater, N.S. The first steel ship fitted for icebreaking, the Stanley went into service in 1888.



clothes became soaked. By the next afternoon their fuel had been exhausted, but fortunately the storm broke up and they were able to see the Island shore. They struggled along until they reached the flat ice which ran out some way from the shore, but here they encountered huge snow drifts almost impossible to wade through, especially with their frozen clothes. They were spotted by a search party from the shore and brought to land. One of the crew members who had become deranged by the cold and exposure, died shortly after, but apparently the remainder suffered no permanent ill effects. In passing, it might be mentioned that after the Island joined Confederation in 1873, the federal government assumed responsibility for the ice boat service.

One of the conditions of Confederation was that the federal government would establish and maintain an efficient steamer service for passengers and mails between the Island and the mainland. As mentioned at the beginning of this article, there was no difficulty in keeping the service going in the summer months and steamer services, good for the times, were operated between Charlottetown and Pictou in Nova Scotia, also between Summerside and Pointe du Chene in New Brunswick. Mails from Nova Scotia were carried via the Charlottetown-Pictou service, but the greater bulk of mail from central Canadian points arrived via the Summerside-Pointe du Chene service. A room fitted up with bag racks and letter cases was provided on the steamer and railway mail clerks from the Island made the crossing and worked mails on both outward and inward trips. This provided as fast a service as possible with the means available at the time and the Island people were quite satisfied with it.

However, in winter the same old problem arose—Northumberland Strait filled up with ice and the steamers used in the summer service could not operate, as they were not equipped for ice-breaking.

"Ice Breakers" Introduced

The first attempt at providing an ice breaker was a wooden ship called the "Northern Light". This boat, of course, could not cope with the heavy drift ice which filled the Strait from December until April and often was held up from ten to twenty days at a time. On many occasions passengers had to walk ashore after the ship stuck on the ice and this could be a very unpleasant and sometimes dangerous experience. During periods when the "Northern Light" was held up, it was necessary to resort to the small ice boats again.

In 1888 a steel ship fitted for ice breaking called the "Stanley" was provided. This ship was small by present day standards, only 914 tons; had only one propeller and shallow draft at the bow and was deeper in the water at the stem. The idea was that she would ride up on the ice and break through. Due to the light weight of the ship and the type of heavy ice which fills the Strait, this method of operation was found to be quite impractical and although the "Stanley" operated sporadically until 1917, she was never a success.

The next ice-breaker provided was the 1090 ton "Minto". An attempt was made to provide a daily service between Pictou, N.S. and Georgetown, P.E.I. by operating the "Stanley" and "Minto" opposite each other, that is, one going one way each day. However, it was found that even with both ships working, there were many occasions when long delays occurred. The records show that on one trip during a winter of heavy ice, the "Stanley" became stuck and the "Minto" broke a propeller in attempting to go to her rescue, as a result the service was held up for seven weeks. Of course, during this period mail service was provided by the ice boats at Cape Traverse—Cape Tormentine.

In 1909 the "Earl Grey" came into the picture. This ship was heavier, had more power and was built with rounded sides—more or less egg-shaped—enabling her to be maneuvered more easily in the ice floes. This ship provided a reasonably good winter service and was by far the best ice breaker to date.



The Long Haul—male passengers were expected to help the crew pull boats across stretches of ice in Northumberland Strait before the days of icebreakers.

These ships all were provided with mail rooms in the same manner as the summer boats and mails were worked in both directions by Island clerks, and thus were ready for quick despatch to destination when the ships reached port. Until the introduction of parcel post, there was no great bulk of mail, only letters and the few newspapers and magazines of the day. Thus, when the ice-breakers were delayed, the small ice boats at the Capes could handle all the mail offering.

The first real step in providing a good winter service came when the car ferry "Prince Edward Island" went into service. Built in Newcastle-on-Tyne and finished in 1915, this ship arrived late that year and operated the winter of 1915-16 between Charlottetown and Pictou on a one-day one-way basis with reasonable success, carrying freight instead of railway cars on the car decks.

As the piers at Port Borden and Cape Tormentine still were not finished by the winter of 1916-17, an attempt was made to provide a daily service between Charlottetown and Pictou by operating the "Stanley" and the "Prince Edward Island" opposite each other as had been done some years previously with the "Minto" and "Stanley". However, it was found that the "Stanley" could not keep up on this basis and the idea was abandoned. The "Prince Edward Island" was put on the Pictou-Georgetown run for the remainder of the winter. Georgetown was used as a terminal rather than Charlottetown since the harbour there is much easier of access during the winter months than the one at Charlottetown.

As this latter service operated on a one-way one-day basis, the ice boats at the Capes were brought into play again to provide a daily service for letters and newspapers, the bulk mail being handled on the Pictou-Georgetown operation. The letters and daily papers destined for the Island were worked by Island clerks in a mail car stationed at Sackville, N.B. and forwarded by the then "New Brunswick and Prince Edward Island Railway" to Cape Tormentine for transmission via the small ice boats. This section of railway is now part of the Canadian National Railways.

The piers at Borden and Tormentine were finished and the car ferry started operating on a regular basis in the fall of 1917, and from that time on transportation has been getting better and better as the years have passed, with the provision of larger and better ferries. The causeway now being built should end our transportation troubles.

**Mr. Coyle retired from the Post Office Department as area superintendent for Prince Edward Island. He wrote this article for the Post Office's publication "The POSTMARK" and it is reproduced here with permission of the editor.*

Établissement d'une section consultative spéciale sur le bilinguisme



On accorde une attention particulière au sein du ministère des Transports à la question du bilinguisme qui suscite beaucoup d'intérêt dans tous les milieux de la société et à tous les échelons de gouvernement dans notre pays. Cet intérêt s'inspire de la déclaration du premier ministre, M. Pearson, sur la ligne de conduite adoptée par le gouvernement en vue de favoriser le bilinguisme dans la fonction publique.

Dans le cadre de cette ligne de conduite, le ministère des Transports a établi une section spéciale, dont la fonction principale est de conseiller les autorités sur l'établissement et la réalisation graduelle de projets visant à accroître au sein du Ministère une connaissance efficace des deux langues officielles, notamment au bureau central d'Ottawa et dans les secteurs du public où le bilinguisme est en usage dans une proportion importante.

M. Paul-A. Chouinard est le chef de cette section qui est l'une des premières du genre dans la fonction publique. A titre de conseiller spécial en bilinguisme, il relève directement de M. W. A. MacPherson, Directeur général du personnel. La section a pour tâche de favoriser et d'accroître le bilinguisme dans les secteurs du Ministère où la connaissance des deux langues est essentielle. Elle déterminera d'abord quels sont les secteurs en question et le personnel le plus directement touché, puis les secteurs dans lesquels une certaine connaissance des deux langues est éminemment souhaitable.

La section conseillera également sur les méthodes, les techniques et la sélection dans le cadre du programme d'enseignement des langues. Un autre aspect de son travail sera d'aider au recrutement d'un personnel connaissant déjà le français, surtout au sein des écoles et universités de la province de Québec.

M. Chouinard fournira sur demande aux bureaux régionaux du ministère un service consultatif en matière de bilinguisme du personnel. Il aidera à ce titre les administrateurs régionaux à établir leurs besoins en matière d'enseignement des langues et prendra les mesures nécessaires à l'instauration de pareil enseignement. Dans l'exercice de ces fonctions, M. Chouinard se rendra dans les bureaux régionaux en vue d'entretiens avec les groupes d'employés, suivis d'entrevues particulières.

Lorsqu'un besoin en matière d'enseignement des langues se manifeste dans une région, on en saisit la Commission du service

civil qui prend la décision définitive sur l'établissement d'une école pour l'enseignement de l'anglais ou du français. Par exemple, l'opportunité d'en établir à Cornwall, à Dorval et à Québec est à l'étude. Il est évident que ces écoles ne serviront pas uniquement au ministère et qu'elles seront à la disposition d'autres ministères. Toutefois, on prévoit que de nombreux fonctionnaires du ministère tireront profit de ces installations pour suivre des cours de perfectionnement en anglais ou en français.

La section spéciale susmentionnée collabore étroitement aux travaux du comité consultatif du bilinguisme du ministère qui a été établi en décembre 1965. Sous la direction de M. Gilles Sicotte, sous-ministre adjoint à la Direction générale, ce comité vise à accroître l'utilisation des deux langues au sein du ministère.

Le comité conseille le conseiller spécial en bilinguisme sur les mutations et remplacements de personnel dans les cas où le bilinguisme entre en ligne de compte et sur la formation des employés bilingues au service du ministère.

Il étudie en outre les besoins d'ensemble du ministère en matière de bilinguisme, notamment en ce qui concerne l'échange de correspondance avec les personnes de l'extérieur, l'échange de correspondance au sein du ministère, la langue employée dans les manuels, circulaires, formules, écriteaux et plaques de nom. Toutefois, il s'occupe surtout de traduire la ligne de conduite générale établie par le premier ministre en normes pratiques pour le Directeur général du personnel, le conseiller spécial en bilinguisme ainsi que pour les directeurs, dont la collaboration sera nécessaire dans la réalisation du programme du ministère en matière de bilinguisme.

M. Paul Chouinard était tout désigné pour occuper le poste de conseiller en bilinguisme. Né dans le comté de Frontenac (P.Q.), il a obtenu sa maîtrise en littérature anglaise à l'Université de Montréal. Avant d'entrer au service du ministère des Transports, il a enseigné dans des institutions du Québec, des États-Unis et d'Afrique. Au cours des dix dernières années, il était professeur au Collège militaire de Saint-Jean; durant cette période, il organisa des cours du soir qui furent suivis par 1,200 adultes désireux d'améliorer leur connaissance de la langue anglaise.

Special Advisor on Bilingualism

Bilingualism, a much discussed subject in all walks of life and at all levels of government in our country, has been given careful attention within the Department of Transport. This is in line with Prime Minister Pearson's statement on government policy for the promotion of bilingualism in the public service.

In accordance with this policy, D.O.T. has established a special unit. Its main purpose is to advise the authorities on the preparation and gradual implementation of plans to increase personnel competency in the two languages. This is to take place not only at Ottawa headquarters but wherever a substantial degree of bilingualism is in general public use.

Paul A. Chouinard heads this unit which is one of the first of its kind in the public service. As special advisor on bilingualism he reports directly to W. A. MacPherson, Director General, Personnel. The unit's task is to promote and increase bilingualism in the department wherever the need for both languages is imperative. First of all it will determine where these areas exist and the personnel most directly involved, and then those other areas where some degree of competency in the two language would be desirable.

The unit will also provide advice on methods, techniques and selection for the language training program. Another aspect of its job will lie in providing assistance in the recruiting of personnel already competent in the French language, particularly from Quebec schools and universities.

Mr. Chouinard will be available on request to provide a staff advisory service on bilingualism to D.O.T.'s regional offices. In this role he will help regional administrators determine their language training needs and, as necessary, make arrangements for such training. In carrying out these duties Mr. Chouinard will visit the regional offices for discussions with staff groups and follow-up individual interviews.

When a language training need shows up in a region, the information is passed on to the Civil Service Commission for

final decision on the opening of a language training school in English or French. Now under study, for example, are such schools in Cornwall, Dorval and Quebec City. These schools, of course, won't be for the sole use of the D.O.T. but for other government departments as well. However, it is expected that many D.O.T.'ers will be taking advantage of these facilities for refresher courses in English or French.

The special unit advisor on bilingualism is working closely with the department's advisory committee on bilingualism which was set up in December, 1965. This committee is headed by Mr. Gilles Sicotte, assistant deputy minister-general, and has been working to promote a greater use of both languages throughout D.O.T.

The committee provides guidance to the special advisor on bilingualism in such matters as staff transfers and replacements, based on the bilingual factor, and also with regard to the training of bilingual employees in the department.

It also examines the overall needs for bilingualism in D.O.T., covering such matters as correspondence with persons outside the department, internal correspondence, and language usage for manuals, circulars, forms, sign boards, and name plates. Mainly, however, it is concerning itself with the broad principles (set forth by the Prime Minister) of practical guidelines for the Director General, Personnel, the special advisor on bilingualism and the branch directors, whose co-operation is needed to carry out the D.O.T. program on bilingualism.

As an advisor on bilingualism, Paul Chouinard is particularly well qualified. A native of Frontenac County, Quebec, he took his Master's Degree in English Literature from the University of Montreal and prior to joining D.O.T. he had a highly successful career as a teacher in Quebec, the United States and Africa. For the past 10 years he taught at St-Jean Military College and while there founded a night school where some 1,200 adults improved their knowledge of the English language.

Lighthouse Supply and Buoy Tenders

by J. W. Braithwaite, chief engineer, CCGS "Camsell"

*Let us talk of the lighthouse tenders, and the work they have to do.
Their duties are many and varied, yet known to only a few.
Most of us take it for granted that the lights and beacons are there,
But most of us don't know how or why, and very few of us care.*

*Every headland or cape has its lighthouse or beacon flashing bright.
Every reef, rock or shoal, in addition, is marked with some kind of light.*

*There are can buoys, cone buoys, dan buoys, spar buoys and markers
to point the way.*

These are the mariner's signposts; his safeguard by night or by day.

*All small lights are now automatic, controlled by a clever device
which makes them blink just as required, perhaps once in a
minute or twice.*

*The buoys serve a threefold purpose, emitting a sound as well;
they're equipped with a radar reflector and also a whistle or bell.*

*These buoys, you should know are buoyant, though moored to the
ocean's bed,
with a large concrete block as an anchor, and a chain to the
buoy overhead.*

*Now all this gear must be serviced, and a very high standard
maintained,*

*Which calls for special equipment, and men who are specially
trained.*

*The work of maintenance, supply and replacement is part of the
normal routine
of the lighthouse supply and buoy tender, a wonderful
floating machine.*

*She is known, to all who follow the sea, as a member of the team
which is tending the light that must never fail to cast its
warning beam.*

Regional Superintendents, Airways and Air Regulations

Meet in Ottawa

For the first time in five years regional superintendents of airways and air regulations met in Ottawa to discuss mutual problems and solutions and to make recommendations concerning operations.

The three-day meeting took place at the Bruce MacDonald Motor Hotel and was split into two sections—the airways sessions were chaired by S. R. Lantinga of Edmonton, while W. R. Lavery of Vancouver chaired those for air regulations. Mr. M. M. Fleming, chief of flight standards and regulations, chaired the joint sessions.

A dinner, at which Assistant Deputy Minister, Air G. A. Scott was the principal speaker, was held on June 13 and was attended by some 50 headquarters and regional staff.



Regional superintendents of air regulations. Front row, left to right: W. R. Lavery, Vancouver; R. O. Beattie, Edmonton and J. G. E. Savard, Moncton. Back row: H. W. Finkle, Toronto; H. Rouselle, Montreal and J. D. Craton, Winnipeg.



Regional superintendents of airways. Front row: R. F. Heiliger, Vancouver and J. P. Lacaille, Montreal. Back row: J. Saphire, Winnipeg; H. L. Spinney, Moncton; S. R. Lantinga, Edmonton, and G. Lloyd, Toronto.

East Side, West Side— *The Public has a look at the Canadian Coast Guard*

by K. N. Parks

Fog horns hooted, ships' whistles bellowed and buoy bells clanged, but there wasn't a bit of fog around when Coast Guard Days were held at the district marine agencies at Dartmouth, N.S. and Prince Rupert, B.C. It was "open house" at both places, and the general public was on hand to find out what the Canadian Coast Guard does and how it does it.

The Dartmouth Agency gates were opened to visitors on the afternoon of June 18. Prince Rupert agency held Coast Guard Day on Sunday, July 3, the day after the agency's fine new buildings were officially declared open at a ceremony at which Northern Affairs and Natural Resources Minister Arthur Laing officiated. Gordon W. Stead, assistant deputy minister, marine, also addressed the gathering at the opening, with Glen R. Stewart, district marine agent, acting as master of ceremonies. Prince Rupert's Mayor P. J. Lester, Dr. W. Wick, president of the local Chamber of Commerce and W. D. Stothert, mill manager of the Columbia Cellulose Company, Ltd., were speakers.

The Coast Guard Days were held in order to give the general public an opportunity to tour agency buildings and learn something about the services performed by the Department of Transport for shipping in Canadian waters, and of the ships and men engaged in the various marine undertakings that are involved. The staffs at the agencies set up displays of various types of aids to navigation and visitors entering the buildings

housing exhibits were met with an array of lights—winking, blinking and sometimes revolving—that would have done justice to a Christmas carnival. Staff members were on hand to explain the workings of the various pieces of equipment and answer the thousand-and-one questions that were put to them. Large photographic displays were on view and, at Dartmouth, the icebreaking film "Captain Fournier and the Ice", was shown.

In the yard areas, heavy equipment, large buoys of all types and, at Dartmouth, even one of the new department-designed fibreglass light towers, were on display. Each item carried an explanatory label concerning its purpose.

At the agency wharves, Canadian Coast Guard ships had their gangplanks lowered for the benefit of crowds of visitors who went aboard to tour the vessels "from stem to gudgeon". At Dartmouth, CCGS "John A. Macdonald", CCGS "Narwhal", CCGS "Sir William Alexander", CCGS "Mink" and CCGS "Rapid" were open to the public; at Prince Rupert, CCGS "Skidegate", CCGS "Alexander Mackenzie" and CCGS "Racer" were on hand. CCGS "Camsell", the Victoria-based icebreaker, also paid a visit to Prince Rupert while en route to her summer duties in the Western Arctic. She tied up alongside a number of other large ships, among them American Navy and Coast Guard vessels, that were on hand for the city's Port Days activities, of which the marine agency program was a part.

Two D.O.T. Meteorologists awarded Patterson Medal

Two Department of Transport meteorologists, D. G. Black, of Ottawa, and J. M. Leaver, of Montreal, were awarded the Patterson Medal during the National Meteorological Congress held in Sherbrooke, P.Q. early in June.

The Patterson Medal Award, founded in 1946, was given to each recipient for his extensive contributions to meteorology in Canada over a period of many years.

Awards in previous years have gone to Dr. Andrew Thomson, Dr. P. D. McTaggart-Cowan, D. B. Kennedy, R. A. Hornstein, Dr. J. S. Marshall and A. J. Childs.

Donald George Black joined the Canadian meteorological service in 1942, and served for more than 20 years as a meteorological officer seconded to the RCAF. He served at Pennfield Ridge, New Brunswick; Debert, Nova Scotia; Trenton, Ontario; and Winnipeg, Manitoba. He was senior meteorological officer at the RCAF aviation forecast office, Trenton, for many years and later became meteorological staff officer at training command headquarters, Winnipeg. He is now superintendent of research, training and development at headquarters.

Don Black made major contributions to meteorology in

Canada during World War II and helped to shape post-war development of meteorological training within the RCAF. He has also assisted in the development of the central training school for RCAF meteorological observers at Trenton, Ontario.

Born at Tamworth, Ontario, he is a graduate of Queen's University.

James McGill Leaver is chief of the meteorological branch's central analysis office in Montreal. He has developed this service from a small unit to a national centre serving the whole country by weather facsimile circuits. The service has become one of the world's foremost numerical prediction units.

Jim Leaver was one of the chief instructors and organizers of the wartime meteorological training courses during the 1940's and was among those credited with maintaining high scientific standards in the Canadian meteorological service during its period of greatest expansion.

A native of Ottawa, Mr. Leaver graduated from Queen's (B.A.) and the University of Toronto (M.A.). He joined the meteorological service in 1938 and served at St. Hubert, Quebec; Trenton, Ontario; Toronto; Ottawa, and currently is at Montreal.

Retirements

Captain N. V. Clark, 60-year-old veteran of the sea, retired in June as master of the CCGS Labrador.

In 1923 Captain Clark came to Canada from Britain as a young man and joined the Canadian Merchant Marine—later called Canadian National Steamships. By 1931 he had risen to master.

During the Second World War he served in the Royal Canadian Navy and rejoined the CNS after 1945. In 1958 he joined the Department of Transport, serving on the NSV Nanook the Brant and the Lady Laurier before becoming master of the Labrador in 1960.

Of his lifetime at sea Captain Clark can recall many outstanding events—the majority of which occurred during his D.O.T. service. In 1961, called the “winter of the big freeze” on the Labrador’s records board, the vessel escorted 104 ships through the ice and assisted in the helicopter rescue of the “Betty Harris” off Cape Breton.

On another occasion the Labrador participated in a dramatic air-sea rescue off the west coast of Newfoundland. Three seal hunters missing from their home port were finally located by an aircraft and it was up to the Labrador to enter the ice pack to rescue them.



Captain Clark was honored on the occasion of his retirement at a party aboard the CCGS Labrador. Left to right: Mrs. Weston and Regional Director, Marine Services Frank Weston, Captain Clark and Mrs. Clark.

More recently, in 1964, the vessel made an emergency trip to Pond Inlet, Baffin Island to supply fuel oil to the community.

Captain Clark highly recommends Canadian Coast Guard service for those interested in going to sea.

“The most interesting sea work is the Coast Guard”, he says. “It offers a young man a good future”.

With his wife and family, Captain Clark is enjoying his retirement at home in Halifax.

Muriel Gwendolyn Rowat, a technician in the former statistics section, retired in May after 36 years of government service.

A native of Manotick, Ontario, Miss Rowat began her civil service career in 1930 after completing senior matriculation requirements and working for a brief time in the Canadian Banknote Company. She was first a clerk with the Dominion Bureau of Statistics, followed by a stint with the Department of Veterans Affairs. She then transferred to the Air Transport Board where she compiled, edited and analysed air passenger statistics.

Miss Rowat continued with the statistics unit until her recent retirement, even though the unit transferred three times during those years—first to the Board of Transport Commissioners, then to the Department of Transport and finally, in April, 1966, to the Dominion Bureau of Statistics (see story on page 4). She was a valued member of the staff. Her many years service had made her most knowledgeable on every facet of this complicated area including air carrier routes, licences, bilateral agreements and characteristics of domestic and international air passengers.

Miss Rowat’s early days of retirement have proved to be busy ones. She has taken up resident for the summer at her log cottage on a Quebec lake and has been gardening, painting, catching trout and pursuing her keen interest in bird watching. Prior to leaving, her D.O.T. friends and colleagues presented her with an outboard motor as a retirement gift.

Robert F. Rees, aircraft maintenance engineer at Ottawa Airport, retired in May after a 20-year D.O.T. career.

Born in Swansea, Wales in 1901, Mr. Rees came to Canada at the age of 8 and was educated in Ontario schools. At the



Miss Rowat, seated, is seen here with colleagues Mrs. V. Rust and Chief R. H. Bradley.

outbreak of the Second World War he enlisted in the RCAF and served for six years as an aero-engine mechanic and radar technician.

In 1945 Mr. Rees joined the Department of Transport and spent the latter part of his career in the Ottawa machine shop of the flight services division.

As a new retiree, Mr. Rees has no intention of pursuing a second career or the like. He expects to be kept busy fishing, attending to his summer home and other interests.

J. R. L. "Chip" Murphy, regional manager of real estate at Edmonton, retired in April after 18 years with the department.

A Saskatchewan lawyer, Mr. Murphy served in the RCAF during the Second World War and became special assistant to the Minister of National Defence for Air. He retired in 1948 with the rank of wing commander and was appointed manager of D.O.T.'s newly-established real estate office in Edmonton. In those days the area covered was everything north and west of Armstrong, Ontario. The staff consisted of one draftsman and a stenographer in contrast to today's staff of six land agents, two surveyors with survey crews, two draftsmen plus an office manager and two stenographers. This staff has now been split up and enlarged with the opening of another regional real estate office in Vancouver.

Over the years "Chip" Murphy was in charge of many programs of land acquisition, most recent of which were the Vancouver Airport and the Edmonton International Airport purchases.

At a dinner held to honor Mr. Murphy, Mr. G. E. McDowell, regional director, Edmonton, presented gifts to Mr. and Mrs. Murphy. Many messages of good wishes



At a retirement ceremony in his honor, Robert Rees receives congratulations and best wishes from (left) J. O. Hunter, superintendent, departmental aircraft maintenance, and M. E. Louck, chief, flight services.

were received from friends and associates in Ottawa and across Canada. In addition to Mr. McDowell, head table guests were Mrs. McDowell; Dr. T. G. How, regional director, Vancouver; Mr. F. S. Currie, Mr. Murphy's successor; Mrs. Murphy, Mr. P. T. Lypowy, regional land surveyor, and Mrs. Lypowy; and Mr. D. H. MacLeod, regional manager, real estate, Vancouver, and Mrs. MacLeod.

Victor J. R. Brister, superintendent of radio regulations for Toronto region, retired in March after 30 years with the department.

A native of Dublin, Ireland, Mr. Brister joined the department as a radio operator in 1936 after serving at sea for a number of years. In 1938 he was promoted to radio technician and to technician in 1946. During those years he contributed his knowledge and skill to the establishment of range stations along the Northwest Staging Route and lighthouse stations in the Great Lakes.

In 1949 Mr. Brister was appointed a radio inspector and from 1953 to 1955 headed the Lakehead radio regulations office. In 1955 he moved to Ottawa on the staff of the controller of radio regulations. After two years at headquarters he was promoted to regional superintendent of radio regulations at Winnipeg. In 1960 he was seconded to act as one of Canada's advisors at the International Conference on

the Safety of Life at Sea held in London, England to draw up a new convention. In 1964 he was transferred to Toronto where he remained until his recent retirement.

Friends and colleagues from Toronto and Winnipeg regions, as well as from headquarters, honored Mr. Brister at a testimonial dinner on March 14. W. A. Caton, controller of radio regulations presented him with an album of Irish recordings and a gift of money after paying tribute to his noteworthy contribution to the department. (see photo below)



J. R. L. Murphy.

Cross-Canada Dateline

Goose Bay—As part of a familiarization program, members of the Goose Bay weather office staff visited the U.S. Strategic Air Command Alert Force facility at Goose Bay. The group pictured at right in front of a KC-135 aircraft are, left to right: Capt. E. Palmer, E. G. Morrissey, Major J. W. Hunter, P. O. J. Pitre, D. W. Layton, J. H. Wilson, F. J. Amirault, D. M. Fraser, W. A. McFarlane, A. D. J. O'Nee.



Ottawa—Fire loss in dollars and cents at D.O.T. air services establishments during 1965 amounted to \$61,085.28. Although this represents an increase over the previous year's figure of \$12,214.50, it is considerably lower than any other year from 1960 to 63. In 1962 D.O.T. fire losses amounted to more than half a million dollars.

The worst fire in 1965, in terms of financial loss, took place in June at Aishihik in the Yukon. A radio transmitter building burned to the ground resulting in a building loss of \$2,800 and equipment loss of \$27,000.

At North Sydney, N.S. a marine radio station burned at a loss of \$16,400 while

at Pangnirtung on Baffin Island an \$8,400 fire took place in a Northern Affairs building. Some 45 smaller fires, ranging in losses from \$25 to \$1,000, occurred throughout the six air services regions.

Vancouver—The department's B.C. weather service is experimenting with special forecasts for the operators of small boats who do not normally have access to forecasts on the marine radio band.

The special service is the result of research by the B.C. safety council, which found that more than 60 percent of the province's losses of small craft in 1965, totalling 84 with a loss of 114 lives, occurred in rough weather for which the boats were

not equipped. It appeared that since general forecasts did not give sufficient localized information, little attention was paid to them.

As soon as he learned of the need, Regional Meteorologist John L. Knox arranged for the collection of weather information for release four times daily to radio stations in navigational areas. Small craft operators are urged to check radio reports before setting out and to take transistor radios with them.

It is hoped that this service will cut down on the toll of small craft.

Ottawa—Headquarters employees enjoy automatic membership in their own recreational association, DOTRA. This year, for the first time in its 17-year history, the organization has a "Madame President".

Elected in May, Mrs. Sylvia Chitouras of personnel administration, will serve for the 1966-67 term. She previously had served as a member of the DOTRA board of directors.

Mrs. Chitouras will have feminine support in carrying out her duties for DOTRA. Four other members of the distaff side were elected to two-year terms on the board.

The association sponsors several annual events for headquarters' employees including the picnic, a golf tournament, a Fall dance, a children's Christmas party and the crowning of Miss D.O.T.

The ladies who will be involved in the arranging of these popular events during the next year are shown in the photo at left, seated left to right: Helen Dubois and Mrs. Chitouras. Standing: Carmen Levesque, Mary Chartrand and Barbara Provost.



Ottawa—L. R. Boucher, a graphic artist with headquarters office services printing division, recently attended a color reproduction seminar at the Graphic Arts Technical Foundation in Pittsburgh, Pennsylvania.

Mr. Boucher, who has been a D.O.T. employee for seven years, was the only Canadian among the 24 registrants. In the photo at right he is seen with six other non-American participants. Left to right: A. Morales, Mexico; D. C. Bhaskaran, India; J. A. Escobar, Spain; B. Gerry and J. Bramble, Brazil; P. M. Laan, Holland and Mr. Boucher.



On Target

Arnold Park, drafting supervisor with the construction branch in the Winnipeg Regional Office, shoots as straight as the lines his men draw at their drafting table.

For the third time in seven years, Mr. Park was a member of the Canadian Bisley Team which competed in England's Bisley Shoot in July. He represented Canada in 1960 and in 1963, as well.

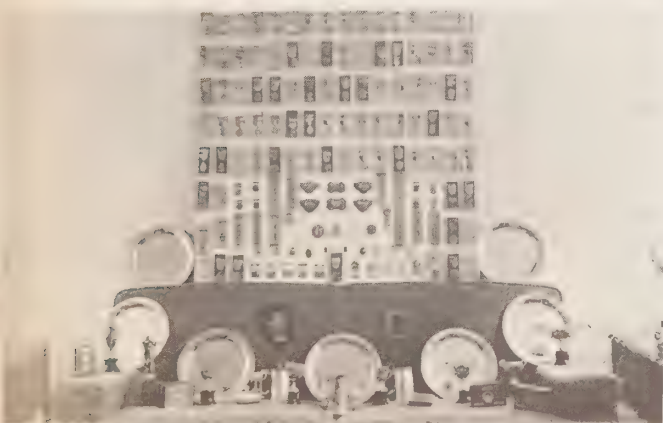
No stranger to competitive shooting, Mr. Park took up the sport seriously some 28 years ago and has since amassed a collection of silverware and titles.

During the war years he competed in many smallbore matches, locally, nationally and in the United States. He has often times been a shooting member of Canada's DeWar Team (International smallbore team competition), twice being chosen adjutant and once captain. As well, for many years he has competed in service rifle matches in Manitoba and Ontario.

Mr. Park's strong point in shooting has been consistency which usually pays off in the aggregate score.



Mr. Park and some of his trophies.



Canadian Coast Guard ALBUM



CCGS MONTMAGNY, a buoy tending vessel designed for the special requirements of the Department of Transport's St. Lawrence Ship Channel division, is attached to the Sorel, Que. District Marine Agency and serves on the St. Lawrence River.

CCGS "MONTMAGNY"

LENGTH: 148 feet

BREADTH: 29 feet

DRAFT: (Max. aft) eight feet, nine inches

POWER: Two Werkspoor direct reversing diesel engines, each developing 565 brake horsepower.

GROSS TONNAGE: 497

41 7 75

T61 TUG BOAT MATERIAL

the **dot**

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COVER

CCGS Simcoe sets up one of the floating weather towers built by Prescott marine district workshop for use in an international wave study which has great implications for Canadian lake shipping.

Editor Yvonne McWilliam
Rédacteur français Edouard Deslauriers

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Wave Study May Flood Lake Shipper's Pockets

by William Dunstan

A seasonal increase of several million dollars in revenues to the Great Lakes shipping industry could be the result of an enormous international weather research project co-ordinated by D.O.T.

Shipowners are hoping that tests will prove their ships may safely be permitted to increase permissible loading draft throughout the season in the Great Lakes, the Seaway, and the Gulf of St. Lawrence.

This wide-ranging program began in 1961. Shipowners asked steamship inspection service of the marine regulations branch if regulations could be changed to permit them to take Great Lakes

carriers, as built, into the Gulf of St. Lawrence beyond inland water limits and if the Great Lakes load-line rules and seasonal limits could be altered to allow deeper loading for a longer navigational season.

They stood to gain much. Each inch of draft in a typical 700-foot upper lake vessel represents more than 100 tons of cargo. An increase of 12 inches in draft for all seasons thus would represent approximately 1,300 tons more cargo, or an increase of about \$5,000 income per trip. If this were applied over three months a year, allowing two round trips a month, it would represent an increase in earning capacity of \$30,000 for each ship.

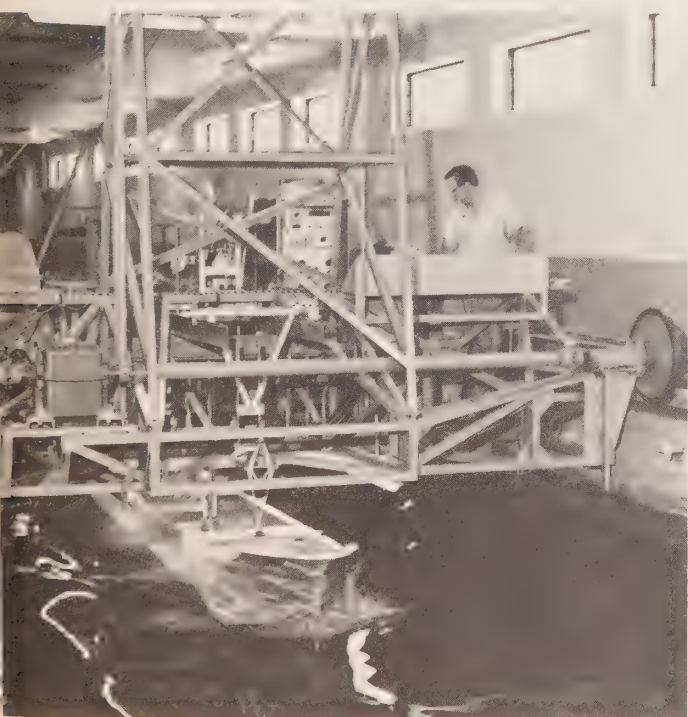
With larger loads and therefore speedier handling of mass commodities such as grain and ore, too, it is likely that the cost of transportation would be reduced appreciably.

To D.O.T. the big question was safety. To assess the hazards involved, it was necessary to know a good deal about sea conditions in the Gulf of St. Lawrence and the Great Lakes. Since no accurate data was available, a program was launched to obtain some. The Dominion Marine Association gave the federal government \$60,000 toward the project. In the United States, where the U.S. Coast Guard is responsible for the American part of the joint enterprise, the Society of Naval Architects and Marine Engineers is contributing funds and technical assistance.

Warren Bonn of steamship inspection division, marine regulations branch, is co-ordinator of the Canadian project. It involves marine regulations, marine works and marine operations and the Meteorological and Telecommunications branches of D.O.T. and the oceanographic groups of the Department of Mines and Technical Surveys.

The marine science branch of the Department of Mines and Technical Surveys first undertook a five-year hindcast study based on available meteorological data recorded on land. There was some hesitation in accepting the findings, however, since the wind-wave formulas currently available are based on ocean conditions. The "fetch" on inland waters is much shorter than on the ocean, where winds can pile up water and waves over thousands of miles. It was decided to make a practical study of wind and wave conditions in the areas concerned to check the accuracy of the formula.

Staff of the National Research Council man strain-gauge equipment installed in three ships—*Ontario Power*, *Saguenay* and *Seaway Queen*—to gauge the strain produced by waves and cargo. Free-floating wave recorders which signal their readings



Model ship is towed through test tank at National Research Council, Ottawa. Test models move at controlled speeds through measured turbulence while stresses are measured by means of instruments on the overhead towing apparatus.

back to the ships provide data on the seas producing the stresses. These recorders were developed by the Bedford Institute of Oceanography for the project.

Among special equipment developed for the project are two floating weather towers from each of which a fibreglass mast rises 58 feet above lake-level. They were designed by Dr. L. A. E. Doe of the Bedford Institute of Oceanography and built in D.O.T.'s Prescott district marine workshop. One is anchored at Superior Shoals, some 40 miles from the north shore of Lake Superior, and the other is in the upper Gulf of St. Lawrence, near Anticosti Island. A third tower, built for the institute, will be installed at sea for independent observations.

The towers have been designed to stay in position with a minimum of disturbance. Each of these open-frame metal structures is equipped with buoyancy chambers which would maintain them quite high out of the water if allowed to float free. However, each is chained to a 30,000-pound anchor and held down well below buoyancy level. The resulting upward push keeps it fairly steady vertically. A 5,000-pound wing anchor keeps the tower from twisting so that the instrument platform eight feet above the water receives little, if any, disturbance.

Instruments make hourly tape recordings of weather data, which are collected periodically. Equipment later will be modified to radio all information, including air and water temperatures, wave measurements, wind velocity and direction, to recording stations on shore.

Not all was smooth sailing for the floating towers. Clay Margison, district engineer, explained that some modifications in the original design had to be devised to cope with certain stress situations. The plans also posed problems for Jack Reilly, the shop foreman, for since the shop was making a completely new piece of equipment, numerous decisions had to be made concerning both details of design and construction techniques.

The first installation became a victim of the weather conditions it was intended to record. After performing satisfactorily for a month, the tower somehow managed to drag itself up where its buoyancy chambers were at the surface. Wave action snapped the tower in two and submerged the upper portion so that, as Warren Bonn says rather ruefully, "the anerometers began recording currents instead of winds."

Other instrumentation includes accelerometers and wave recorders moored off-shore in a number of locations. Their observations are transmitted to recording stations by means of electric cable and radio. Meteorological stations on land also provide data which is incorporated in the survey.

The summing-up of the Canadian data in this wide-ranging, international program will be made at Ottawa in a test tank operated by the National Research Council. Scale models of the types of ships concerned are cut, hinged, and fitted with strain gauges. By this means, the stresses produced in the ship by any particular sea state can be reproduced in the model.

Corrected hind-cast formulas will be derived from the recorded wind and wave information and it then will be possible to review historically from 20 to 40 years of weather data. The wind and other data so obtained will be put through a computer and processed to determine the worst sea conditions which have occurred in the Great Lakes and the Gulf of St. Lawrence. These worst conditions will be compared and reproduced to scale in the model testing tank and then made slightly worse as a safety factor. The stresses produced in the model ships under various load limits will determine what the full-size ships can stand. The Steamship Inspection Service will then know whether or not the lakemen can safely increase their loads and extend their season.

When the necessary knowledge is gained, the steamship inspection service will get together with colleagues in the U.S. Coast Guard to reach agreement on recommendations. These recommendations will be considered by the governments of the two countries in deciding whether the joint regulations currently in force should be modified.



Clay Margison, Prescott district engineer, and Jack Reilly, Aids to Navigation shop foreman, study blueprints of floating towers which were built for use in the international wave study.

Lake Weather Gets Going-Over

Vacation attractions of Lake Huron took second place to duty in late July when the meteorological branch joined forces with the Great Lakes Institute for an intensified weather survey at Baie du Dore field station.

Lake weather got a through going-over from 1,000 feet to water level (and below!) when the basic resources of the field station were supplemented by the research ship CCGS Porte Dauphine and an aircraft carrying the airborne, infra-red radiation thermometer which the meteorological branch recently developed for taking lake temperatures from the air.

The field station has a weather tower in some 45 feet of water about two miles from shore. Rising 30 feet above the surface, it records the air temperature and wind at heights of $7\frac{1}{2}$, 15 and 30 feet above lake level. A newly-instrumented, outboard-powered catamaran takes similar data from the $7\frac{1}{2}$ -foot level down to the water-line.

The Porte Dauphine's meteorological boom takes a micro-profile of the temperature, humidity and wind from the surface to a height of 44 feet. In addition, the ship sends up wiresonde balloons to a height of 1,000 feet, tethered by means of nylon cords, to record these factors at higher levels. Water temperatures also are taken, both by means of an immersion thermometer and special ship-board tests of the radiation thermometer.

During the survey the radiation thermometer also was used in an aircraft to take lake temperatures from higher altitudes over a greater area.

Lloyd Richards, head of the met branch lakes investigation unit, was in charge of the project. Research Assistant Don Masse was his principal aide. Other D.O.T. personnel included Meteorologist R. W. Shaw, who was in charge of operating the infra-red thermometer on board ship, and Research Assistant George Irbe, who operated it on the aircraft. Research Assistant R. G. Chapel was in charge of the wiresonde operations. Michel Moschos, instrument technician, was responsible for the lake tower and the catamaran, while Student Assistant Robert Root is the permanent staffer at the field station during the summer.

The main objective of the project, Mr. Richards explained, was to study the transfer of energy from winds to waves. Since this has been found to vary with the temperature of the water and the temperature structure of the atmosphere, an intensive study of temperatures was of special importance. The many methods of recording not only ensure provision of the necessary data but also afford an opportunity to compare the methods of collecting these data.



Lloyd Richards and Bob Root check equipment aboard the new 28-foot "Met Cat" research catamaran. The craft is instrumented to record weather data near water-level.

An Award from NORAD

Captain George S. Burdock, of the icebreaking cable repair ship CCGS "John Cabot", received a special NORAD award in a ceremony which took place July 22 aboard the "John Cabot" in the Port of Montreal.

The award, called the "Shield of Freedom", was received from the American Air Defence Command in recognition of services rendered by Captain Burdock to the United States Government. He and his crew repaired, under extremely adverse conditions, a submarine cable in Baffin Bay in November, 1965.

Transport Minister J. W. Pickersgill was represented at the ceremony by the Hon. John Turner, minister without portfolio. The U.S. Consul General in Montreal, Richard H. Hawkins, was in attendance as well as G. W. Stead, assistant deputy minister, marine; A. H. G. Storrs, director of marine operations; and D. F. Bowie, president of the Canadian Overseas Telecommunication Corporation. Mr. Turner made the presentation.

Captain Burdock's achievement occurred when a break in a submarine cable south-west of Thule, Greenland, in Baffin Bay, had been reported and CCGS "John Cabot" was called upon to make the necessary repairs. The Canadian Coast Guard had never had to carry out such work in the Arctic so late in the year.

Upon arriving at the site in the beginning of November, the crew of the cable repair ship set to work but current-driven ice and violent winds made the job extremely difficult. They suc-

ceeded, on November 5th, in raising one end of the broken cable. The ice, however, got the upper hand and it was decided to abandon the work temporarily and to call for icebreaker assistance. "We had fixed buoys to the ends of the cable," Captain Burdock later stated, "but they were torn away by the ice".

Answering the call of the cable repair ship, Canadian Coast Guard icebreaker "d'Iberville" commanded by Captain Wilfrid Dufour of Quebec, and the American icebreaker "Westwind" headed northward.

When work could be resumed, it took the crew of the "John Cabot" only twelve hours to repair the break. CCGS "d'Iberville" and the "Westwind", using football tactics, pushed aside the floating ice masses while the work continued, most of the time by the light of projectors because the Arctic night, in winter, lasts almost 24 hours per day.

When the job was finished, the three vessels headed south without delay because ice already covered 90 per cent of the more remote passages of Baffin Bay. Twice during the return voyage, they had to cope with hurricane force winds. Captain Burdock related that they experienced gales up to 90 miles an hour in Davis Strait.

For the "John Cabot" the trip was only its second into the high Arctic. In August of the same year, its crew had repaired a broken cable in the same area.



A special NORAD award, called the "Shield of Freedom", was presented to Captain Burdock of the icebreaking cable repair ship CCGS "John Cabot". Shown here, from left to right, are D. F. Bowie, president of the Canadian Overseas Telecommunication Corporation; Hon. John Turner, minister without portfolio, acting on behalf of Minister of Transport J. W. Pickersgill; Captain Burdock; and Richard H. Hawkins, U.S. Consul General in Montreal.

La décoration, dite «Shield of Freedom», a été remise au capitaine du brise-glace câblé John Cabot. Dans cette photo, on voit, de gauche à droite, le président de la Société canadienne des télécommunications transmarines, M. D. F. Bowie; le ministre d'État, l'hon. John Turner; le capitaine Burdock; et le consul général des États-Unis à Montréal, M. Richard H. Hawkins.

Une décoration de NORAD

Le capitaine George S. Burdock, du brise-glace câblé John Cabot de la Garde côtière canadienne, a reçu, le 22 juillet dernier, une décoration spéciale de NORAD au cours d'une cérémonie qui s'est déroulée à bord du John Cabot dans le port de Montréal.

Cette décoration, dite «Shield of Freedom», est accordée au capitaine Burdock par le Commandement de la défense aérienne de l'Aviation américaine. Elle lui a été décernée en reconnaissance des services rendus au gouvernement des États-Unis en réparant, dans des conditions absolument défavorables, un câble sous-marin dans la baie de Baffin en novembre 1965.

Le ministre des Transports, l'hon. J. W. Pickersgill, était représenté à la cérémonie par le ministre d'État, l'hon. John Turner. Le consul général des États-Unis à Montréal, M. Richard H. Hawkins, assistait également, ainsi que le sous-ministre adjoint pour la marine, M. G. W. Stead, le directeur des opérations de la marine au ministère, M. A. H. G. Storrs, et le président de la Société canadienne des télécommunications transmarines, M. D. F. Bowie. La présentation a été faite par M. Turner.

L'exploit du capitaine Burdock remonte à novembre 1965. On venait alors de rapporter le bris d'un câble sous-marin au sud-ouest de Thulé, au Groenland, dans la baie de Baffin. Pour réparer le bris, on fit appel aux services du John Cabot. La Garde côtière n'avait jamais eu à effectuer de tels travaux dans l'Arctique à une époque aussi tardive.

Dès son arrivée sur les lieux au début de novembre, l'équipage du câblé se mit immédiatement à la tâche. Les glaçons, emportés par le courant et les vents violents, rendaient le travail

excessivement difficile. En dépit des difficultés, on réussissait, le 5 novembre, à remonter une extrémité du câble brisé. Cependant, la glace devait prendre le dessus. On décida donc d'abandonner temporairement les travaux et de faire appel à de l'aide. «Nous avions fixé des bouées aux extrémités du câble, a déclaré plus tard le capitaine Burdock, mais elles furent arrachées par la glace.»

Répondant à l'appel du câblé, le brise-glace d'Iberville de la Garde côtière canadienne, commandé par le capitaine Wilfrid Dufour, de Québec, et le brise-glace américain Westwind firent route vers le nord.

Lorsqu'on put enfin reprendre les travaux, il ne fallut que douze heures à l'équipage du John Cabot pour réparer le bris. Le d'Iberville et le Westwind, empruntant les tactiques du football, écartaient les masses de glaces flottantes pendant que se poursuivait le travail, la majeure partie du temps à la lumière de projecteurs, car la nuit arctique, en hiver, dure presque 24 heures par jour.

Les travaux terminés, les trois navires mirent le cap sans tarder vers le sud, car déjà la glace couvrait environ 90 pour cent des passages les plus reculés de la baie de Baffin. Par deux fois durant le voyage de retour on eut à faire face à des vents d'ouragan. Le capitaine Burdock raconte qu'on essuya des coups de vent de 90 milles à l'heure dans le détroit de Davis.

Pour le John Cabot, navire de construction assez récente, c'était son deuxième voyage dans cette région. En août de la même année, son équipage avait réparé un câble rompu dans le même secteur.

Montreal Airport Employee Wins Unusual Trophy

Strange as it may seem Real Paquette of the Montreal Airport maintenance section recently was presented with a trophy for being champion lock picker of the Quebec Master Locksmiths Association.

But it's all perfectly legal and above board. The trophy is awarded annually to the member with the best lock picking record achieved during competitions held at monthly meetings. It is donated to the association by Dominion Lock Company.

Mr. Paquette, 29, considers it part of his job with the maintenance section to be able to take any lock apart and put it back together in jig time.

Gagnant d'un étrange trophée

Réal Paquette, des services d'entretien de l'aéroport de Montréal, vient d'être proclamé le champion des crocheurs de serrures de la province de Québec. Un trophée approprié lui a été décerné par l'Association des maîtres-serruriers du Québec.

Aussi invraisemblable que cela puisse paraître, c'est tout de même dans l'ordre et surtout légal. Le trophée est accordé annuellement au membre de l'Association qui a conservé les meilleures notes dans des épreuves mensuelles de crochage de serrures. Le trophée est un don de la compagnie Dominion Lock.

M. Paquette, 29 ans, estime qu'il est utile pour un employé des services d'entretien de pouvoir démantibuler et reconstituer une serrure en moins de rien.



Real Paquette (left) receives the trophy from Rene Piche, newly-elected president of the Quebec Master Locksmiths Association.

On voit ici Réal Paquette, à gauche, qui reçoit son trophée de René Piché, nouveau président de l'Association des maîtres-serruriers du Québec.

The Sad Saga of the "Great Eastern"



The "Great Eastern" at her pier, foot of Hammond St., New York, 1860.



Cable Laying Across the Atlantic, Commissioned by Cyrus Field.



The "Great Eastern" in Newfoundland.

by Raymond Schuessler*

One of the most famous ships of its day, and possibly in all sea legend, is the illfated giant Great Eastern which was also the sea's most historic failure.

Imagine a ship five times larger than had ever been built up to 1857. Her propeller weighed 36 tons, larger than even the Queen Mary of our day. She was so big—693 feet long, 22,500 tons—that, besides her 20 lifeboats, she carried a 200-foot steamer strapped her side.

No ship ever carried more power: she had two engines, 24-foot screw, five funnels, two 58-foot paddle wheels, six masts and 6,500 square yards of sail.

No existing drydock would hold her, so she was built on a soft river bank of the Thames and became the first large ship to be launched sideways.

The "great factory" was finished in 1857. The ship lay on 120 iron rollers over 160 wooden timbers on two feet of concrete and supported underneath by 2,000 piles driven 30 feet into the mud of the river.

Tugs and winches and huge hydraulic rams were recruited to pull her. A grandstand was built and admission charged to witness the grand event. Bands played and pubs stayed open all night.

Tugs strained, chains rang taut and the rams spilled steam. But after two months the ship lay only halfway to water. She floated free on January 31, 1858.

She wasn't but a day at sea when the curse that was to follow her, forever, struck. Without warning, the forward funnel blew out of the ship. Bits of the vessel fell like hail. Boiler-room fires were raging. A man who had jumped overboard was sucked into the huge paddlewheel and broken. Five explosion victims died. But the ship survived.

No ship had created more world-wide interest. This was an unbelievable mastodon among ships of that era. By June 1860 the Great Eastern was ready to sail to America where interest was intense.

As soon as the ship docked in America a carnival began to mushroom around her. Ticket booths went up and hucksters began to sell food and souvenirs, small ships were fitted out as restaurants, and circus acts heaved-to.

The directors decided to sponsor a two-day cruise. Two thousand passengers bought tickets for \$10 apiece. The cruise is one of the funniest episodes in marine history.

First, they didn't take enough food. Second, they had accommodations for only 300. Drunks roamed the decks, gambling was prevalent everywhere. Men fought for the staterooms.

Waiters sold mattresses for 50 cents apiece and later stole them to sell again. It rained during the night on 1700 souls who slept on deck and the grime from the funnel turned them all into mud balls. Worse of all, the ship got lost during the night—100 miles off course.

In its third trip to America it encountered a tremendous storm. Up to now the Great Eastern had proved its safety in a crisis. But now she was being pummelled by a gale that showed no mercy.

Both paddle wheels were torn off. Every life boat was lost or had to be cut loose. The rudder post of 10-inch iron was broken. The screw had to be stopped. Sails that were hoisted ripped and hung like shredded clotheslines. For three days the storm raged. Eight hundred and thirty-two passengers strapped themselves to their bunks and prepared to die.

By a clever bit of engineering the rudder was made secure with heavy chain and tackle so the crew could operate and the Great Eastern limped back to Ireland. This sensational on-the-spot engineering feat was the talk of the times and diagrams of it were printed in newspapers and scientific magazines.

Nothing but misfortune had attended the ship. She was to damage or sink ten ships in her short lifetime.

Fitted out with new gear she sailed again. On her way back from America she grossed \$225,000. Perhaps she was on the way to becoming solvent.

On her return to America with a great list of 820 passengers, she ripped her bottom near Long Island. The hole was as large as many ships—83 feet long and nine feet wide. The rock that ripped her was christened ever after with the name of its victim—Great Eastern Rock.

No one could conceive how such a tremendous hole could be repaired. Two men, the Renwick brothers, walked into the ship's office and offered to repair the ship—which they did with a 100-foot cofferdam.

She was now bankrupt to a tune of \$5,000,000. No one ever thought to use her for what she would have been most profitable—long-distance voyages to the Orient.

In 1865 the Great Eastern was commissioned to lay a cable across the Atlantic. Cyrus Field, the American industrialist who lost \$2,250,000 on two previous attempts, thought surely the huge ship could succeed where others had failed. The Great Eastern would receive nothing if the venture failed, but a fortune in stock if the cable was laid.

The cable laying went smoothly, with only a few backups for damaged wire in 1186 miles. But suddenly the cable snapped and disappeared sickeningly over the side in water three miles deep. They grappled for the line for seven days, but every time they hooked the huge cable their line broke.

Again the Great Eastern had failed. The ship returned to England again, but only to get more cable and more money. This time on July 27, 1866 they succeeded in laying the cable.

Her cable-laying days were over when the telegraph companies decided to build their own special cable ships.

In 1885 the ship was offered at auction. Bought as a coal tender for Gibraltar, she was rented out for a year to a department store which used her as a traveling billboard. She finally ended up as a museum for a shilling a look.

She was sold for \$80,000 and sadly limped to the scrap pile. This was the only time the ship was to pay off. An auction was held for the ship parts. It brought in \$290,000. Besides the giant machinery parts and metal which brought in the greatest price, all its furnishings from bells to dishes sold like wildfire and probably now adorn thousands of homes in Britain.

In 1890 the ship finally gave up to ghost. The greatest ship of the sea had gone to Valhalla, perhaps with a bit of a bowed head for her ungracefulness. But ungracefully as she had reigned, she was indeed a Queen.

*A freelance writer from Buffalo, N. Y.

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View of hydraulic model showing luminous floats used on model to determine current velocities in the area of Ile Ste-Helene. The technician, shown at right, records current velocity with the help of a chronometer.

In the St. Lawrence Ship Channel

More than 100 Years of Digging

by Edouard Deslauriers

For 100 years and more the St. Lawrence Ship Channel has been swept, dredged, deepened and widened by all possible methods. Such work has gone on uninterrupted since 1844 and, in recent years, has been intensified by the development of the St. Lawrence Seaway and the increased use of the St. Lawrence River Ports by larger vessels.

In 1844 the Ship Channel—the section of river stretching approximately 300 miles from Les Escoumins to Montreal—had a depth of only 10½ feet in several places and an average width of 150 feet. Today, all along its course, the channel has a minimum depth of 35 feet and an average width of 800 feet, except in Lac Saint-Pierre and in the stretch from Vercheres to Montreal, which is now being widened. All this has been done at a cost of some \$150 million over the century.

Has the channel now reached its maximum depth? The answer is no, quite the contrary! Department of Transport engineers, at their Montreal and Ottawa office and at their laboratory in Ville LaSalle, are currently studying further improvements.

According to John Sylvester, the man in charge of the engineering field investigations section of the Ship Channel, the purpose of the studies is to find a way to attain the 39 foot level and to maintain it most of the time, allowing for a 35 foot minimum depth during periods of low water. "Such a situation," he says, "would enable us to meet today's navigation needs."

History of the Ship Channel

For three centuries after Jacques Cartier discovered that the flats at the upper end of Lac Saint Pierre were too shallow to allow ocean vessels to proceed westward, nothing was done to improve navigation between Quebec City and Montreal.

Records show that in 1824, only 55 of the 613 vessels using the St. Lawrence River ventured as far inland as Montreal. Larger vessels had to stop at Quebec City. Goods destined for Montreal and points west were transferred to lighter vessels

for the remainder of the journey. For some this was, of course, a profitable enterprise and they opposed any plans to deepen the channel. Quebec was the official Canadian port of entry and it controlled the Port of Montreal.

In 1805 provincial legislation proposed the improvement of the navigable channel between Quebec City and Montreal, but such improvements were, it seems, limited to the installation of a few lighthouses here and there on the river.

It was not until 1844 that serious, concrete measures were finally adopted. A start was made on opening a channel, 14 feet deep, in a straight line across the shoals in Lac Saint Pierre. The project was abandoned three years later, however, when it was decided for reasons of economy to deepen and widen the existing channel which zigzagged through Lac Saint-Pierre.

D.O.T.'s Ship Channel Division

St. Lawrence River traffic grows heavier year by year. In order to cope with the increasing traffic on the river, a special service of the federal Department of Transport has been given the task of keeping the channel open to traffic and to ensure the safe passage of vessels.

For several winters now, the department's icebreaking operations east of Montreal—carried out to minimize flood danger—have enabled ocean vessels to come into the Port of Montreal during the mid-winter months. Last year, for instance, more than a hundred vessels sailed in the channel during January, February and March.

Chief engineer of the ship channel operations is Herbert L. Land. He is assisted by Maurice Boudreau, in charge of operations and maintenance, and John Sylvester, heading the engineering field investigations section.

The ship channel division has four special vessels at its disposal—the Detector, the Frontenac (which is to be replaced by a new vessel, the Nicolet, next year), the Beauport and the Ville-Marie. Five landing craft are also in use. When required, the icebreaker CCGS Ernest Lapointe is put into service for ship channel work.

All these vessels are equipped with the most up-to-date equipment for detecting obstructions to navigation in the ship channel. The instruments, which are able to take a complete sounding of the river bed, determine the quality of the soil and the exact position and height of any obstruction found at the bottom of the channel.

One of the most difficult tasks facing D.O.T. engineers is to provide a channel big enough for large vessels without a resulting lowering of the level of the water in the port of Montreal. Dredging to deepen the river bed in one place causes a lowering of the water level elsewhere. One possible solution now being studied by the engineers is the construction of dams and locks.

One of the main tools of the department in its engineering investigation work on the behaviour of the river is the hydraulic model located at Ville LaSalle. The model, a reproduction to scale of the St. Lawrence River, encompasses the course lying between Montreal and Becancour, a distance of 88 miles.

Constructed a few years ago at a cost of nearly one million dollars, the model is 800 feet long. The equipment which it comprises makes possible the reproduction, to scale, of all situations existing in the ship channel itself. The model studies

are the responsibility of the hydraulic studies division under R. H. Smith. C. J. Lawrie is the supervisor of hydraulic laboratory activities.

Engineers worked for two years prior to the construction of the model collecting data on the form and depth of the river bed, the exact position of islands, constructions along the course, as well as soundings, detail on water and the velocity of the current. All of this data has been built into the model making it possible to study the behaviour of the river from all aspects and under all conditions.

The model has been used in studies related to the initial development of the grounds for EXPO '67; for the Boucherville tunnel; and on the effects of closing various channels.

Other model studies have concentrated on possible control dams, which, along with other regulating structures in the river could probably raise by $2\frac{1}{2}$ or 3 feet the level of low waters in the Port of Montreal.

Still with the help of the model, the possibility of widening the channel to 800 feet from Vercheres to the Canada Cement Wharf at Montreal was studied. While such studies showed the widening would result in lower water levels in the Port of Montreal, it was realized, that unloading fill in certain strategic locations would re-establish the level in the port and could even raise it to a higher level.

So, even though work in the St. Lawrence River Ship Channel has been going on for more than 100 years, it would appear that present and future progress in navigation will require a continuing development program for, perhaps, another 100 years.



A laboratory technician gathers data on current velocity with the help of a recording directional current meter.

Double Ceremony-

Launching and Christening For New CCG Weatherships

by K. M. Parks,

Monday, July 4, was an important day for the Canadian Coast Guard. As the sun was setting, hundreds of people thronged the shipyard of Burrard Dry Dock Company Limited in North Vancouver. They were there to see the first of two new weather-oceanographic vessels, CCGS "Vancouver", officially being accepted for Canadian Coast Guard service, and a sister ship, CCGS "Quadra", being launched.

Gordon W. Stead, assistant deputy minister, marine, accepted "Vancouver" on behalf of the Department of Transport while Mrs. J. R. Nicholson, wife of the Minister of Labour, was sponsor of "Quadra".

The scene was an impressive one. The gleaming new "Vancouver", ship-shape and already undergoing trials, lay quietly in her berth beside the ways down which "Quadra" slid smoothly into the harbor after Mrs. Nicholson broke the traditional bottle of champagne against her towering bow.

The ceremony had an international flavor unique in the department's shipbuilding annals. Senor Carmelo Matesanz, representing His Excellency Javier Conde, Spanish ambassador to Canada, was present in recognition of the naming of the new ship after the Spanish navigator who, along with the English Captain Vancouver, explored the Canadian west coast in the eighteenth century. In an address at the launching, Labour Minister Nicholson referred to "Vancouver" and "Quadra" as ships of international importance, designed for none but peaceful purposes for the benefit of many nations. They are equipped, he said, with the most advanced scientific equipment for the purposes of meteorology and oceanography of any such ships now afloat.

In his remarks during the acceptance ceremony and speaking briefly at the reception which followed the launching, Mr. Stead referred to the far-reaching contribution the two ships would make in the field of research.

He paid tribute to the work that had been done over the years by the old weather ships, "St. Catharines" and "Stone-town". He noted that the two new ships had been designed, not only for peak efficiency in work, but with a degree of comfort and spaciousness of living accommodation that would be appreciated by crews who had to man the rough ocean station for weeks at a time.

J. W. Hudson, executive vice-president of the shipbuilding firm, was master of ceremonies at the launching. Rev. Father Simpson and Rev. Canon Stanley Smith, chaplain to the Mission to Seaman, Vancouver, blessed the new ship. Hon. Clarence Wallace, president of the Burrard Company, spoke briefly and expressed his firm's pride at carrying out the construction of the new vessels.

Mr. Wallace announced that the Department of Transport was presenting a model of the new weather ship to the Inter-governmental Maritime Consultative Organization headquarters in London, England, because the ships were leaders of their

type in the world and their work would have such international significance. He thanked the Spanish government, through Mr. Matesanz, for the gift of a commemorative plaque that would be placed aboard CCGS "Quadra" at a later date.

Mr. Matesanz, in a brief speech, made particular reference to the historic relationship of his country with Canada's Pacific coast and said he felt quite at home on the coast with its many traditional Spanish place names.

During the reception Mrs. Nicholson was presented with an inscribed silver tray as a memento of the launching.

An interesting sidelight was the presentation by Mrs. Arthur Laing, wife of the Minister of Northern Affairs and National Resources, of a picture of Captain George Vancouver to Capt. Lingard, master of CCGS "Vancouver". Mrs. Laing was sponsor of that ship when it was named.

CCGS "Vancouver" and CCGS "Quadra" are identical ships and are the longest vessels in the Canadian Coast Guard fleet. They measure 404 feet, three inches in length, are 50 feet wide, have a depth of 30 feet, six inches from the upper deck and draw 17 feet, six inches of water. Each has a load displacement of 5,530 tons and is powered by turbo-electric engines with oil fired boilers, developing 7,500 shaft horsepower. They have a maximum speed of 18 knots and range of 8,400 nautical miles at 14 knots.

They were designed by G. T. R. Campbell and Company, naval architects, of Montreal, to the requirements of the department's shipbuilding, meteorological and telecommunications and electronics branches as well as those of the Department of Mines and Technical Surveys and the Pacific Oceanographic Group at Nanaimo, B.C.

The hull and superstructure forms were achieved following extensive model testing at the National Research Council laboratories, to ensure the smooth operation needed in ships housing a great deal of delicate scientific equipment. Their speed will enable them to reach Ocean Station "Papa" with a minimum of delay and will also be of importance in instances when they are involved in search and rescue work. Each has a bow water jet reaction steering system for low-speed manoeuvring, as well as Flumetype anti-rolling tanks to make them steadier in heavy seas.

Both ships will have recreation and hospital facilities and will be fully airconditioned. Each will have four radio-equipped lifeboats, an oceanographic launch and workboat. Total complement of each will be around 96 persons, including 15 technical officers such as meteorologists, oceanographers and electronics technicians.

CCGS "Vancouver" will be undergoing equipment trials of various types until some time in October, when she will replace one of the present weather ships. CCGS "Quadra" is expected to be completed in the spring of 1967. The two ships were built at a total cost in excess of \$20,000,000.



First Moving Sidewalk Installed At Montreal International Airport

The first of four speedwalk passenger conveyors for Montreal International Airport was operating early in August. It is located at the incoming section of the international tunnel.

The 450-foot moving sidewalk helps passengers arriving from overseas to move quickly from the aeroquay to the immigration, health and customs facilities in the main terminal building. It travels 120 feet a minute, or one-and-one half miles an hour, about half the average walking speed, so that a passenger walking on the belt takes little more than a minute to pass through the 500-foot tunnel.

The three other speedwalks in the \$800,000 contract are expected to be completed this fall. They include one in the departures section of the international tunnel and two 475-foot units in the domestic tunnel. These latter will be the longest moving sidewalks in any airport in the world.

The conveyor belt of the first installation is 43 inches wide, with a grooved carrying surface of neoprene rubber. It is steel-reinforced to ensure lateral rigidity and is carried on closely-spaced rollers under the edges.

Retirements

Herbert L. Elliott, senior steamship inspector at Victoria, retired early last summer after 18 years with the department.

For many years Mr. Elliott was an engineer on the China Coast. During the Second War he had a distinguished career with the Royal Canadian Navy and, while serving as engineer commander on H.M.C.S. Uganda, he received the O.B.E.

In 1948 Mr. Elliott joined the steamship inspection service in Vancouver, transferring three years later to Victoria. In November 1962, he became senior steamship inspector.

Mr. Elliott was honored at a luncheon by local marine business associates and was presented with a wrist watch. As well, on behalf of his friends and co-workers in Victoria and Vancouver, R. G. Boomer, divisional supervisor, presented him with a gift.

Joseph L. Doucette, engineer on the CCGS "Thomas Carleton", retired recently after 47 years of government marine service.

Mr. Doucette joined the CGS "Aberdeen" as a seaman in 1920. Four years later he transferred to the "CGS Dollard" as a fireman and oiler. In 1954 he was oiler aboard the CCGS "Walter E. Foster", and transferred to the Carleton as engineer in 1960. The Order of the British Empire was conferred on him after the Second War.

"Following the sea is a good life", says Mr. Doucette.

A handy man with tools, Mr. Doucette is well-known for his wood carving, in particular the birds he makes. He plans to devote a lot of his new found leisure time to carving and boat building and also to fishing.

M. Joseph L. Doucette, mécanicien à bord du n.g.c.c. «Thomas Carleton», a



J. L. Doucette photographed shortly before retirement.



R. G. Boomer, divisional supervisor, Vancouver with Mr. and Mrs. H. L. Elliott.

pris sa retraite récemment. Il a passé 47 ans de sa vie dans les services de la marine du gouvernement canadien.

Il a commencé sa carrière comme marin, en 1920, à bord du navire canadien «Aberdeen». Quatre ans plus tard, on le retrouvait à bord du «Dollard» où il remplissait les fonctions de graisseur et assumait d'autres responsabilités relevant du domaine de la mécanique. En 1954, il est transféré au «Walter E. Foster». Enfin, en 1960, il est promu mécanicien à bord du «Carleton».

«Il n'y a rien de plus agréable que la vie en mer», soutient M. Doucette, qui conseille aux jeunes de joindre les rangs de la Garde côtière canadienne.

Un passe-temps favori de M. Doucette est la sculpture sur bois. Il se propose maintenant d'y consacrer plusieurs heures de ses loisirs.

J. T. Vallières, at a gathering held in his honor, Mr. Vallières received gifts and best wishes from his co-workers. Chief Commissioner of the board, Mr. Rod Kerr, Q.C., and Mr. C. W. Rump, Secre-

tary of the board, both paid tribute to Mr. Vallières' efficiency, loyalty and the esteem in which he was held by his colleagues.

M. J. T. Vallières, employé de la Commission des transports du Canada, a pris sa retraite récemment après 46 ans de service.

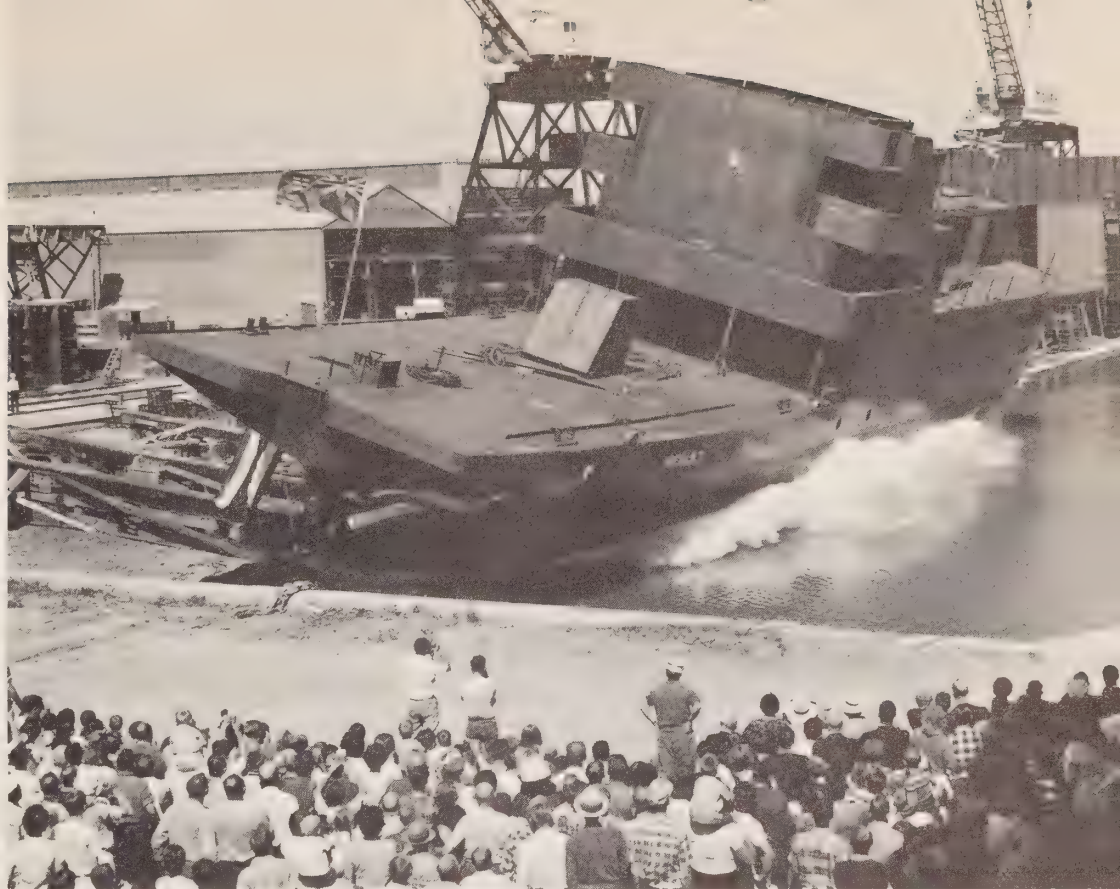
M. Vallières est entré à l'emploi de la Commission comme messenger en 1920. Il a gravi les échelons pour en arriver à assumer la direction de la gestion des dossiers de la Commission, poste qu'il occupait au moment de sa retraite.

A l'occasion d'une fête en son honneur, on lui a remis quelques cadeaux-souvenir accompagnés des meilleurs vœux de ses compagnons de travail. Les présentations ont été faites par le commissaire en chef, M^r Rod Kerr, c.r., qui a rappelé les loyaux services rendus à la Commission par M. Vallières au cours de sa longue carrière. Le secrétaire de la Commission, M. C. W. Rump, a aussi pris la parole.



Left to right: Mr. C. W. Rump, Mrs. Vallières, Mr. Vallières and Mr. Rod Kerr, Q.C.

CCGS "Nicolet" Joins the Fleet



"Another new ship for the Canadian Coast Guard", read the newspaper headlines on Saturday, August 20, when the new sounding vessel CCGS "Nicolet" slid down the ways at Collingwood Shipyards, rocked wildly in a small tidal wave of her own making, and then settled down to await the finishing touches.

"Nicolet", which will be a replacement for the veteran CCGS "Frontenac" in the St. Lawrence Ship Channel service, was sponsored by Mrs. D. M. Ripley, wife of the department's director of marine hydraulics. Mr. Ripley, along with Mr. Gilles Sicotte, assistant deputy minister, general, and several senior marine services officials from headquarters, were present for the ceremony. From Montreal came Mr. Maurice G. Boudreau, deputy to the chief engineer, St. Lawrence Ship Channel, accompanied by District Marine Agent Noel Paquette of the Sorel Agency.

The launching took place at noon, with the vessel being blessed by Rev. Philip Downer, rector of All Saints Anglican Church. Guests attended a reception in the shipbuilding firm's headquarters building, followed by a dinner.

Alec Webster, general manager of the shipyard, was chairman for the ceremony. He presented a handsome hand-carved cigarette box, on which will be mounted the cork from the champagne bottle used in the launching, to Mrs. Ripley along with an engraved silver tray, to commemorate the occasion.

After Mrs. Ripley had expressed her thanks to the builders, Mr. Ripley spoke briefly recalling the historic background of the pioneer French explorer Nicolet, for whom the ship was named. The vessel, he pointed out, was aptly named for it would be "exploring" the channel of the St. Lawrence in the interests of safe movement of shipping.

Rev. W. A. Downer, M.L.A., Reeve L. McKeen, acting on behalf of the municipality, and Herbert E. Smith, Q.C., M.P., also addressed the gathering, paying tribute to the work done by the Canadian Coast Guard and the Transport Department's marine services in general.

Constructed at a cost of \$2,323,962, the "Nicolet" is a twin

propeller diesel engine vessel similar to CCGS "Beauport" which has been in service with the ship channel division since 1961.

It measures 166 feet, 6 inches in length and is of all-welded steel construction, strengthened for navigation in ice.

Principal Particulars

Length, overall.....	166' 6"
Breadth.....	35' 0"
Draft, loaded ...	9' 6"
Speed, Maximum.....	13 knots
Shaft Horsepower	1,350
Displacement, loaded.....	850 tons
Crew.....	32 persons

The Nicolet has a "plotting station" as well as special depth recording apparatus, for the specific purpose of recording and plotting soundings in the St. Lawrence Ship Channel and adjacent waters. This recording is done by a remotely controlled electro-hydraulic winch allied with the traditional sounding boom, which continuously transmits soundings through an electro-mechanical linkage to the automatic recording apparatus in the "plotting station".

The propulsion system consists of two diesel engines, each of 812 brake horsepower continuous rating, driving twin reversible controllable pitch propellers through reduction gears and hydraulic couplings, to provide a total of 1,350 shaft horsepower at the propellers.

This vessel has an interesting feature: The main engines, propellers and steering can be remote controlled from consoles situated in the wheelhouse, plotting station and bridge wings. The latest electronic and telecommunication equipment will be fitted, including special shallow shaft draft echo sounding apparatus.

The accommodation provides single cabins for officers and engineering staff and double cabins for crew. Excellent messing, catering and recreational facilities are provided.

Canadian Coast Guard Reports Growing



Canadian Coast Guard ship rescuing Survivors of French ship DOUALA which sank in Atlantic storm.

List of Search and Rescue Incidents

- "Assisted in extinguishing fire aboard fishing vessel.
- "removed sick lightkeeper from lighthouse.
- "searched for victims of collision at sea".

So ran the long and growing list of marine search and rescue incidents handled by the Canadian Coast Guard as boating activity, both commercial and pleasure, reached its summer peak across Canada.

The Coast Guard provides the principal marine element in Canada's air-sea rescue operations, in support of the over-all responsibility of the Royal Canadian Air Force. Its 60-odd red and white ships, from the largest icebreakers down to small rescue launches, have been active in rescue undertakings during the past year. Between July 1, 1965 and July 1, 1966 they have taken part in more than 500 such incidents.

On the Atlantic and Pacific coasts and in the Gulf of St. Lawrence the ships are called on to aid stricken vessels or carry out other mercy missions the year round. In the Great Lakes, the rush of activity comes during the months of navigation. On the West Coast and in the Great Lakes, where there is a great density of pleasure boating, the Coast Guard ships have to cope mainly with mishaps involving yachts and small pleasure craft. The activities of the D.O.T. fleet, where search and rescue undertakings are concerned, are directed by three rescue officers stationed at search and rescue centres maintained by the RCAF at Halifax, N.S., Trenton, Ont., and Vancouver, B.C.

During the year the ships responded to 97 distress calls in Atlantic and Gulf waters involving sea searches, fire-fighting, provision of emergency medical aid, evacuation of accident victims, assistance with emergency mechanical repairs and towing helpless craft to safety.

In most cases, the Coast Guard ships acted in co-operation with search and rescue aircraft of the RCAF, which usually are sent out upon receipt of a distress signal to locate the victims and direct Coast Guard or other nearby ships to the scene. All ships in the vicinity of a marine accident are required by law to lend assistance as needed. When a number participate, the senior master of the participating Coast Guard vessels acts as searchmaster at the scene.

Among notable incidents in eastern waters was the rescue in late June of three boys adrift at sea in a rowboat with broken oar-locks. They were located by the RCAF and picked up by CCGC "Rapid". CCGC "Rally" took part in the search for victims of the disastrous collision in mid-June between the foreign flag motor ship "Bordapian" and the Nova Scotia fishing boat "Reliance", in which most of the fishing boat's crew lost their lives.

In July the icebreaking cable repair ship CCGS "John Cabot" went to the aid of an oil drilling vessel with crippled engines 150 miles south of Newfoundland. The cable ship stood by while temporary repairs were made and a commercial salvage ship could reach the scene. On a number of occasions, accident victims have been removed from fishing vessels at sea and taken to hospital in the nearest port. Helicopters carried aboard the larger Coast Guard ships have proved of great importance in these operations. Greatest single source of distress calls was from fishing vessels with engine failure.

On the Pacific Coast, booming summer pleasure boat activity is added to the heavy coastal transportation and fishery traffic. In British Columbia waters the Coast Guard took part in 346 marine search and rescue operations in the year. Of that number, 50 per cent involved pleasure craft, 28 per cent involved fishing vessels and 22 per cent were concerned with other ships.

The small inshore rescue launches, "Moorhen" and "Mallard", responded to 166 calls, almost all involving pleasure boaters in trouble; the two 95-foot cutters, CCGC "Ready" and CCGC "Racer", answered 112 alerts; the lifeboats at Bamfield and Tofino took part in 58 rescue undertakings and other Coast Guard ships participated in 10 operations.

The West Coast operations included the location and rescue of persons adrift in helpless craft, assistance to large deepsea vessels in distress, upsets and other mishaps involving small craft and the transfer of marine accident victims from ships to hospital care ashore. The Bamfield and Tofino lifeboats are shore-based and their crews put out to sea most of the time in the face of conditions such as only the stormy north Pacific can produce on Vancouver Island's outer shores.

The Search and Rescue Centre at Trenton, Ont., recorded 77 marine search and rescue incidents between July 1, 1965, and May 31, 1966, in most of which the ships of the Canadian Coast Guard played a part.

The cutter "Relay" was on hand, along with a commercial vessel, to assist the pulpwood carrier "Prince Quebec" when an explosion ripped the ship in mid-lake Ontario. The crew was rescued and the ship, kept afloat by her cargo of pulpwood, was towed to Rochester, N.Y.

CCGC "Spray", one of three 70-foot cutters serving on the Great Lakes, assisted a Toronto harbour fireboat in fighting a serious fire aboard the freighter "Orient Trader". "Spray" was also on the job when a large yacht was rendered helpless after her propeller became fouled and a scuba diver, member of "Spray's" crew, was able to free the blades.

"Relay" rescued the owner of a yacht that exploded while en route from Youngstown, Ohio, to Toronto. He was found, badly injured, adrift on a life raft and taken to hospital in Toronto. Most of the incidents in Great Lakes waters involved private pleasure craft.

There were a number of incidents, other than those in which the Coast Guard participated, in areas such as Toronto and Hamilton harbours and other waters where local rescue squads responded to calls.

25 D.O.T.'ers Receive Blood Donor Certificates

The Red Cross Blood Donor service has issued merit scrolls to 25 headquarters employees, for each having given 20 or more donations to help save lives.

For many years these people have supported blood clinics by sharing their good health with others less fortunate. Some of these donors have passed the 40 mark, while one casual employee, Mrs. C. R. Plouffe of marine services' pilotage division, was

singled out for special attention by the Red Cross for having given more than 50 donations. She is to receive a special certificate at the annual regional meeting of the Red Cross.

The other certificates were presented late in August on five separate occasions by the assistant deputy ministers of marine and air services and by the directors of administration, personnel and transportation policy and research.

Recipients were:

K. O. Angus,	marine regulations
Capt. F. J. Bullock	marine operations
A. G. Tuttle	marine works
J. W. T. McLusky*	Coast Guard College, Sydney, N.S.
H. C. McCauly	Construction, engineering and architectural
L. R. Saunders	Construction, engineering and architectural
W. P. Wetherall	Construction, engineering and architectural
C. A. Sager	Telecommunications and electronics
G. Wintermeyer	Telecommunications and electronics
A. Tilley,	airport & field operations
L. P. Emmell	civil aviation
D. A. Murdock	civil aviation
J. E. Walsh	civil aviation

Recipients were:

R. G. Armstrong	records
Miss A. Zinkham	records
L. Jackson	purchasing
G. Duncan	Stores
J. W. M. Gazeley	Personnel
Miss A. Raskob	Personnel
P. A. Carter	staff relations
F. H. Edwards	training and development
E. W. Howe	training and development
D. H. Marko	Transportation policy and research
G. G. McLeod	Transportation policy and research

In addition to the above, two members of the staff of the aviation statistics bureau (now part of the Dominion Bureau of Statistics) received similar certificate. They are Mrs. Velma Rust and J. Bekody.

**presented at Sydney, N.S.*

Vacation Daze

by

Don McKinnon

Radio Engineering
Telecommunications Branch

"Down to the sea in ships" is a refrain that runs through my head and is, I believe, part of a line from a well known poem for mariners. One August day while basking in the sun on the sand at St. Georges Bay, Cape Breton, I watched a helicopter leap up from the sea from a ship and would that I could utter the thoughts that arise in me—that's from another poem, Bud!

For some years now my family and I have relaxed away our vacations at Seaside, Cape Breton Island. This hamlet boasts of having the best and safest beach on Cape Breton and for more than 15 years I have taken up my position on this lovely, uncluttered stretch of sand and washed away my aches and pains in the warm waters of St. Georges Bay.

This particular day I speak of, relaxed and supine in the hot sun, I was lazily watching a large vessel cruising through the sea across my range of vision when out of her bowels leaped this crazy bird—a helicopter. No doubt doing her duty, this bird

skimmed here and there with such ease that I began to take some interest in her activities. After darting from ship to shore back and forth across the water, to everyone's surprise she came and gently settled to earth near the canteen adjacent to the beach. Two mighty men from another world leapt out and ducking under the whirling blades disappeared inside the canteen.

The bird was almost instantly surrounded by every man, woman and child in the area wanting to inspect and photograph this wonder of wonders from outer space. Proudly we viewed the bright, clean Canadian flag painted on her side above the words "Canadian Coast Guard". All too soon the men returned and climbed into their wonderful bird and, while we all waved, with a mighty roar straight up she went and swiftly returned to her home on the sea.

We poor land-bound souls, clutching our cameras, slowly returned to our relaxed positions on the beach to ponder the wonders of travel by air and by sea.

Two Receive \$75 Suggestion Awards

In recent months two D.O.T.'ers have received \$75. cash awards for worthwhile suggestions submitted to the Public Service Suggestion Award Plan.

Miss Evelyn Smirle, a secretary in air services branch, headquarters, advanced the suggestion that Hansard, the House of Commons debates, carry a separate contents page with nothing else printed on the back. She pointed out that for various rea-

sons government offices have occasion to separate issues of Hansard for circulation to various employees and it was not possible to do so if material appeared on both sides of certain pages.

Her suggestion was adopted by the legislative services section of the House of Commons and she subsequently received a cheque and certificate of achievement.

An administrative officer at meteorological branch headquarters, J. R. F. Judd recommended that double-walled corrugated cartons be used for shipments instead of wire-bound cartons or wooden boxes. His idea was tried out and is now being used wherever practical since it results in considerable savings. Mr. Judd, too, received a cheque and certificate.

Other recent winners include:

<i>Name</i>	<i>Position</i>	<i>Location</i>	<i>Amount</i>
J. L. Des Biens	radio operator	Beaumont, P.Q.	\$10.00
J. R. Ferguson	technician, electronics	Montague, P.E.I.	10.00
H. J. Karl	technician, meteorological	Vancouver, B.C.	10.00
K. L. Leek	technician, meteorological	Winnipeg, Man.	15.00
F. P. Luetzger	air traffic controller	Abbotsford, B.C.	10.00
J. B. MacPherson	technician, meteorological	Halifax, N.S.	10.00
W. B. Mitchell	airport manager	Terrace, B.C.	25.00
E. D. Smiley	technical officer	Ottawa, Ont.	20.00
W. G. Williams	airport mechanic	Yarmouth, N.S.	20.00
J. O. Wood	communicator	Montreal, P.Q.	10.00

Economy Ice Cube for Giant Cocktail Parties

Léo Fréchette, ship's clerk aboard the CCGS "C. D. Howe", tells of sighting an iceberg in Davis Strait on August 9.

Mr. Fréchette has been going North on Arctic resupply trips every summer for the past 12 years, so he is familiar with icebergs, but the one seen that day surpassed any he had seen before.

The berg appeared to be perfectly square, like an ice cube. When measured with a sextant it proved to be 1,080 feet long with 200 feet showing above sea level. Since approximately only one tenth of an iceberg appears above the surface, the total height of this one must have been about 2,000 feet. Mr. Fréchette estimated its weight to be about 9,000,000 tons.

He contends a cube that big would cool a lot of drinks!

Novel Weather Tower



Meteorologist Dave Colwell, project engineer with the net branch research and development section, Toronto, inspects a novel weather tower designed by the section for use in the Columbia river basin, British Columbia. The tower, which will be installed this fall, will record precipitation, temperature, and snow depth. This information will be sent to a receiving station by means of radio.

Canadian Coast Guard ALBUM



CCGS "*Wolfe*" is a fully strengthened icebreaker, operating out of the Department of Transport Marine Agency at Charlottetown, P.E.I. She serves in Arctic waters during summer resupply operations and in winter assists shipping in the Gulf of St. Lawrence.

CCGS "WOLFE"

LENGTH: 220 feet

BREADTH: 48 feet

DRAFT: 16 feet, four inches

POWER: Steam; two Skinner-Unaflo engines, each developing 2,000 rated horsepower.

GROSS TONNAGE: 2,022

417715

T61

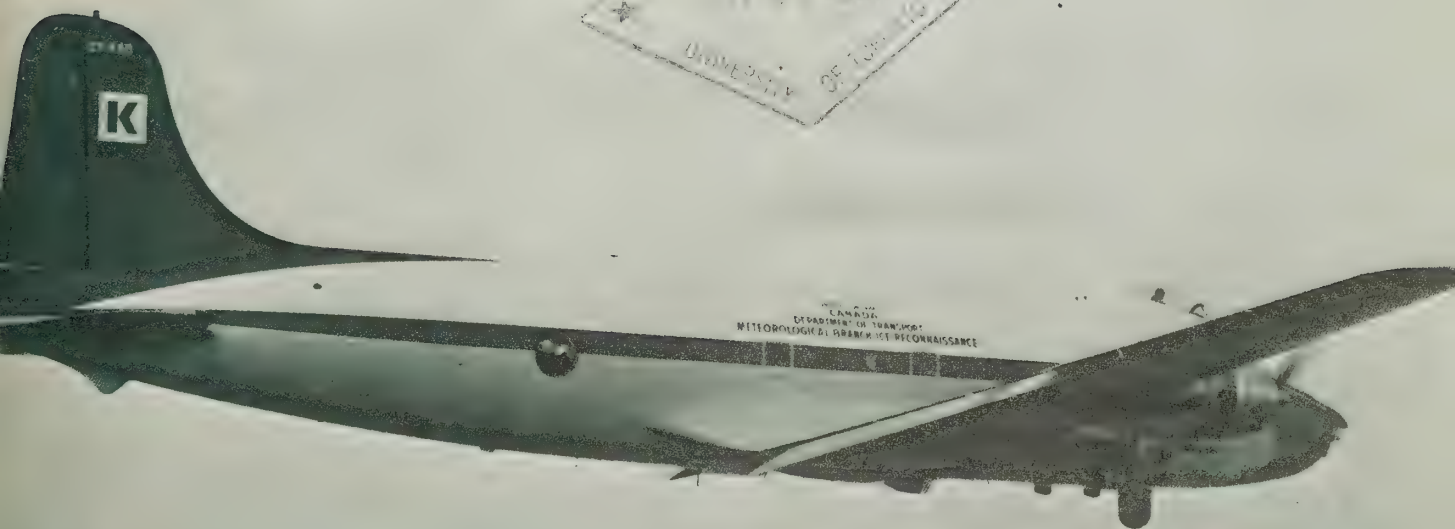
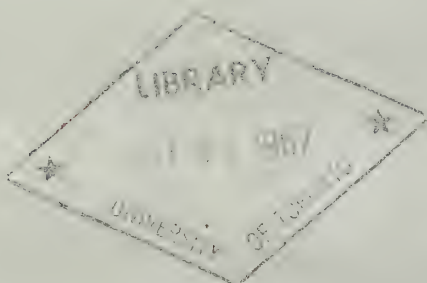
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COVER

One of two DC-3's extensively modified for ice survey work sets out on reconnaissance duty in eastern and northern coastal regions. (Story on page 6).

COUVERTURE

Un DC-3, spécialement outillé pour faire l'étude de la formation des glaces, part en tournée d'exploration le long du littoral canadien.

Editor

Yvonne McWilliam

Rédacteur français

Edouard Deslauriers

THE DOT is a Department of Transport staff magazine published under the authority of the Minister, Hon. J. W. Pickersgill, by the Information Service Division.

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MRS. YVONNE McWILLIAM

As a product of the personality, energy and skill of its editor over the past five years, *The Dot* has reached enviable stature as a staff magazine.

Among indications of its success are the growing list of persons outside the D.O.T. family who receive the publication by special request, the frequency with which newspapers "scalp" its pages for their own use, and the outspoken admiration of professionals in the field, some of whom paid the further compliment of imitation.

Yvonne has retired, but not to rest! She is resuming her role of full time Ottawa housewife and mother, looking after a husband and two lively girls, aged five and three.

She takes with her not only happy memories of D.O.T., of which she assured us when she left, but our thanks and best wishes for the future.



Christmas 1966 provides us all with an opportunity to pause and take stock of a country now reaching maturity.

We are on the eve of this great nation's 100 anniversary. Canada has sprung from small isolated outposts clinging to the coasts of North America into a dynamic young country. With 100 years of experience behind us we can now look to a bright future of rapid growth based on our wealth of human and material resources.

Everyone associated with the Department of Transport can take pride in the contribution the department is making to the growth of the nation. Without transport—sea, land and air—Canada would not exist.

As we move into the second century of Confederation in Canada, the world is moving into a new era in transport and communications. Everyone sharing in the responsibilities in this era and under new policies can look to new horizons.

Merry Christmas and a Happy New Year.

A l'occasion de Noël 1966, il convient de nous arrêter un moment pour faire le bilan des réalisations d'un pays qui atteint à sa maturité.

Nous sommes au seuil du centenaire de notre grande nation. Les petits postes isolés disséminés sur les côtes de l'Amérique du Nord, d'où a jailli le Canada, ont donné naissance à un jeune et dynamique pays. Forts d'une expérience vieille de 100 ans, nous pouvons maintenant envisager un brillant avenir caractérisé par une expansion rapide fondée sur nos immenses ressources humaines et matérielles.

Tous les membres du ministère des Transports peuvent s'enorgueillir de l'apport du Ministère à l'expansion du pays. Le Canada ne saurait exister sans ses services de transport maritime, terrestre et aérien.

A l'aube du deuxième siècle de la Confédération canadienne, le monde entier s'achemine vers une nouvelle ère dans le domaine des transports et des communications. Des horizons nouveaux s'ouvrent à tous ceux qui assument des responsabilités dans ce domaine et à qui incombe la mise en œuvre de nouvelles lignes de conduite.

Je souhaite à tous un Joyeux Noël et une Bonne et Heureuse Année.

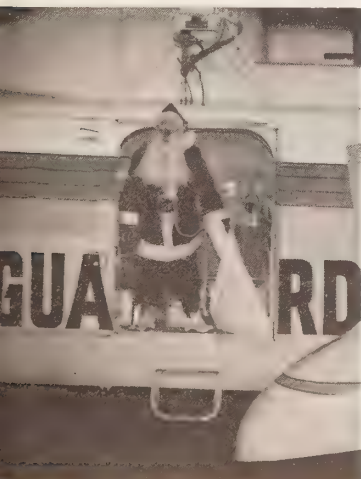
A handwritten signature in dark ink, appearing to be "J. A. ...". Below the signature is a long, horizontal, slightly wavy line that spans most of the width of the signature.



*This year, on the holiday occasion,
I send greetings to all departmental employees
but, in particular, offer my full
gratitude and good wishes to the families,
whether wives, children or parents,
of departmental employees.
Your support is an essential part
of the success of all our departmental
efforts.*

*Cette année, à l'occasion des Fêtes,
je formule des vœux à l'intention de tous
les employés du Ministère, mais je désire
en particulier exprimer toute ma reconnaissance
et mes souhaits les meilleurs à leurs épouses,
enfants ou parents.
Votre appui est essentiel au succès
de toutes nos entreprises.*

J. R. Baldwin



Thoughts of a Lightkeeper's Wife

On "The Light" Before Christmas

*'Twas ten days before Christmas and all through the night
Snowflakes danced in the rays of Cape Croker's big light.
Santa jingled his bells up at the North Pole
While I scanned the road full of drifts and potholes.*

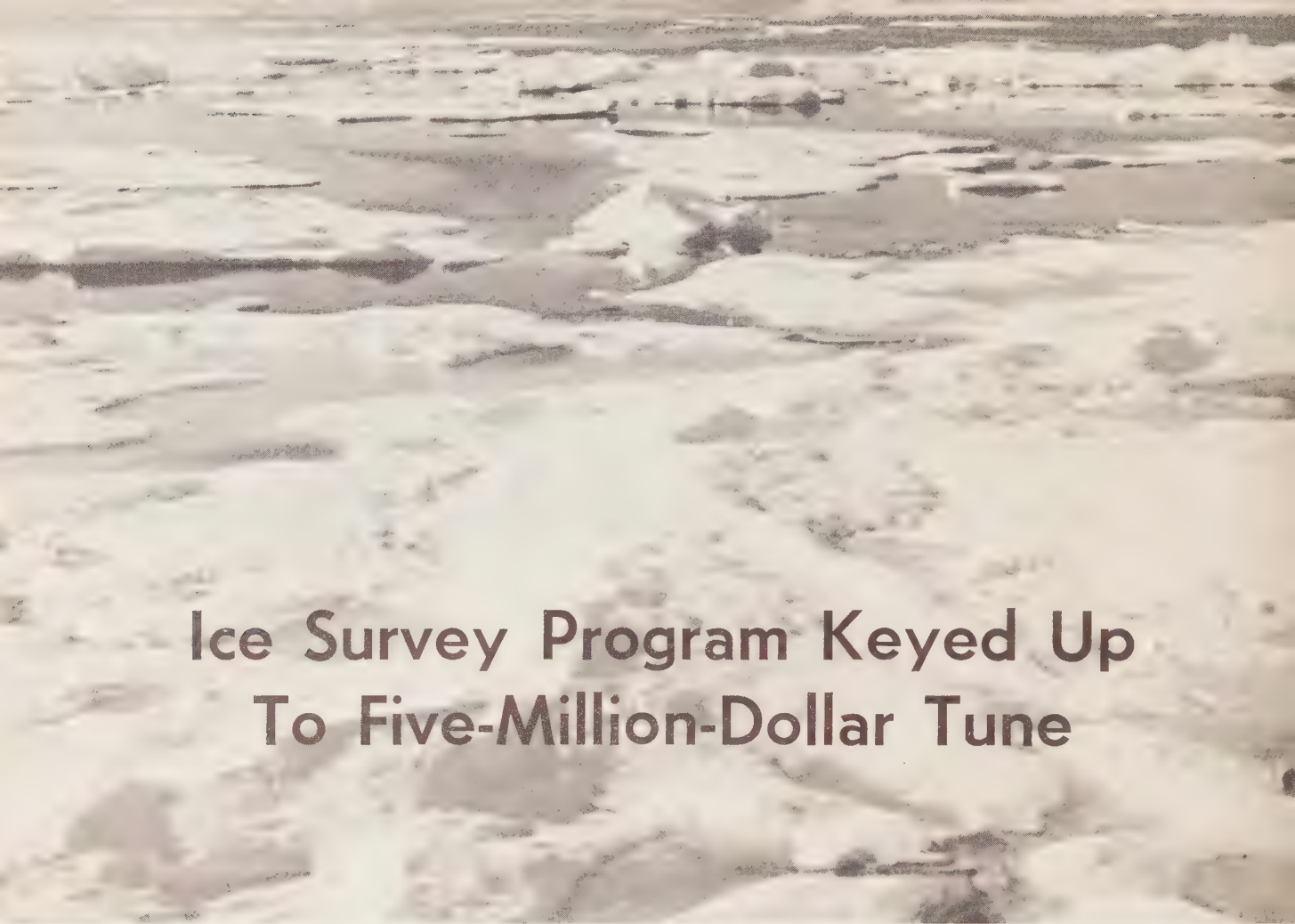
*The wilderness road that would take us from here
Had ruts deep enough to gulp Santa's reindeer.
December was up to its usual tricks
And I thought, with a sigh, "We are in a fix!"*

*I sprang from my chair to view Georgian Bay—
The season's last freighter was passing our way.
There was one thing to do ere the end of the year—
Close up the station and get out of here.*

*Then in a flash, while the fog-horn did clatter,
I saw just the way to settle the matter.
All it would take—now, what was that word?
What we needed was a whirly-bird!*

*A 'chopper to sky-lift us over the bluffs
To avoid all the drifts, the potholes and ruts.
Oh for a helicopter, Saint Nicholas, please—
So we can be home for Christmas Eve!*

Mrs. Juanita Bourke,
Cape Croker Lightstation
Wiarton, Ontario.



Ice Survey Program Keyed Up To Five-Million-Dollar Tune

Two Douglas DC-4 aircraft with a range of more than 2,500 miles plus safety fuel reserves and a unique assortment of domes and blisters protruding from their fuselages constitute the Meteorological Branch's \$5 million answer to many of the problems posed by aerial ice reconnaissance responsibilities.

That is the price-tag of a five-year contract for Kenting Aviation Limited, Toronto, to supply the modified aircraft, avionics equipment, flight crews and maintenance. The department, of course, provides the necessary trained ice observing specialists.

Ice reconnaissance has been among Met's specialties since 1957, when it was made responsible for providing such services in support of shipping in ice-congested waters of the eastern Canadian seaboard, sub-arctic and arctic waters. Through operational trials and an intensified training program, Met's ice reconnaissance unit has developed personnel, equipment and procedures which made it one of the world leaders in this field.

Introduction of the faster, longer-range aircraft is expected to greatly facilitate ice reconnaissance of the enormous region involved and to increase the flying safety margin. The greatest frequency of unfavourable landing weather conditions usually occurs at northern airstrips during the periods when ice reconnaissance is especially important. Thus a returning reconnaissance aircraft may have to fly long distances to reach an airstrip with suitable landing conditions.

Extensive modifications give the planes a strange look. The forward portion of the fuselage is topped by a transparent oval-shaped dome canopy which shelters the main observing position.

Both rear sides of the aircraft's body bulge with huge transparent blisters through which the observers survey the ice conditions below. Under the belly protrudes a large rubber radome which houses the radar antenna. The metallic structure of the doppler radar aerial can be seen to the rear.

The interior bears little resemblance to that of a conventional airliner. Instead of neatly-aligned rows of seats, the space is occupied by numerous cabinets housing what looks like an elaborate laboratory. There also is office space, a galley, and a rest area with bunks. The storage area carries an impressive array of engineering tools and spare parts including one complete spare engine and a mountain of survival equipment, clothing, and rations in case the aircraft should be forced down somewhere in the Arctic wasteland.

Right behind and above the pilots, sits the principal visual ice observer. He is the key man and is responsible for mapping the ice as observed along the path followed by the aircraft. His eyes are constantly scanning the area around him, assessing such sea-ice features as coverage, size of individual pieces, age, and topography. Directly in front of him and slightly below eye-level are arrayed the instruments of his trade: 24-hour clock, true heading indicator, radar altimeter, radar scope, doppler position indicator—even a closed circuit television monitor system which enables him to observe the ice directly below the craft or at close range through the magic of zoom lenses. The television monitor extends the range of visibility beyond that of the human eye under certain conditions of atmospheric obscurity.

The electronic and navigational console bears some similarity to those found in the control room of any radio broadcasting station. It is manned by the radar ice observer, a navigator and an avionic technician who also assists the navigator.

A radar ice observer works in close coordination with the main visual ice observer. His primary task is to keep a continuous and accurate plot of ice limits and water features as observed through radar regardless of the visibility conditions. His position at the console is equipped with approximately the same instrumentation provided at the visual station.

An overall precision navigation system provides a high degree of position accuracy, so necessary in the charting of ice conditions as well as enabling the aircraft to rendezvous with ships requiring tactical support.

The navigation equipment itself is among the best available anywhere. Its operation is based on the measure of speed against time along a certain course, supplemented with highly sophisticated electronic parameters. Doppler radar provides accurate ground speed and drift angle information. This information is displayed and then fed into a computer which translates the data into actual geographical position co-ordinates. To minimize the consequences of equipment failure, each component is installed in duplicate.

During a mission, all crew members are kept in constant communication with one another through an intricate inter-communications system. Outside communication with ships,

ground stations or other aircraft can be originated from any of the main positions.

Flights frequently are of long duration. Sorties up to 12 hours are common and at certain seasons Arctic reconnaissance involving up to 20 hours of flying a day for three to five consecutive days have become routine. Thus the crew must be large enough to take shifts: a minimum of three pilots, a navigator, an avionic technician, two engineers and four ice observers form the standard crew. The ice observers rotate at their appropriate tasks for shifts of approximately two hours each.

The two planes will make routine reconnaissance of the entire eastern and northern shoreline as well as a good deal of the seaway and great lakes. Two smaller aircraft will be chartered to supplement the work of the two DC-4's in the great lakes, the seaway and the approaches to Goose Bay.

Much of the ice observer's service to shipping is immediate-prompt information to Canadian Coast Guard icebreakers on ice conditions when navigating in ice-congested waters. Among other aspects of this service is that of establishing the average data of ice formations and recession in specific areas. Through this information, it will be possible to set navigational seasons in the far north as well as determine ice conditions surrounding potentially strategic harbours.

As an unusual "fringe benefit" service, the observers report the numbers of whales, seals and other mammals sighted. This information is passed along on a confidential basis to the appropriate government agencies.



Technicians make final examination of the first of two DC-4's to go into service while E. Stashyshyn, supervisor ice observer (left) and Ice Observer John Clarey check their charts.

RETIREMENT?

Not in a Lifetime!

Meteorology still plays a large role in the life of Dr. Andrew Thomson, O.B.E., Toronto, who, although he retired in 1959 as Dominion meteorologist and director of the meteorological branch, still maintains numerous scientific contacts throughout the world.

In Ottawa recently to attend meetings of the associate committee on geodesy and geophysics sponsored by the National Research Council, he made many perceptive comments about last winter's "busman's holiday" to observe at first hand the various weather services in South America.

He went mainly because, he said, information was scanty and he was curious to learn something about arrangements where, instead of Canada's single weather service, each country has from three to six services. These may include services run by the army, airforce, department of agriculture, department of water resources, and another subscribed to by commercial airlines.

In Brazil, the navy is responsible for observing stations on the coast; stations in the interior are under the department of agriculture and the air force operates the upper air stations. Directors of these services meet each month or so to discuss their responsibilities.

Despite the multiplicity of services, total government expenditures on meteorology in South America are extremely small in comparison with the Canadian weather budget.

Telecommunications facilities are generally poor and there are only 10 radiosonde stations on the entire continent.

At Guatemala, where he began his visit, the meteorological service has an annual budget of \$63,000. At Bogota, Columbia, an expenditure of approximately \$1,500,000 may be undertaken by the United Nations to reorganize the meteorological service. In Ecuador, the U.N. already has spent more than \$1,000,000 in building a climatological and hydrological service and hopes to set up a forecast office at the Quito airport.

Dr. Thomson spent some time with the weather service in Peru and at Santiago, Chile, where the U.N. has been successful in reorganizing the weather service with the aid of a grant of more than \$1,500,000 spent over a number of years. Assistance also was provided through a gift from the United States.

Canada's meteorological service is highly regarded in South America, reports Dr. Thomson, and a number of officials expressed the wish to have professional staff trained in this country. While Canada trains a good number of technicians and professionals from Commonwealth countries, there is, however, no program for providing such training to the people of South America.

WE GOOFED!

Remember "Assignment Trinidad" in our August issue, the story of Meteorologist A. J. Shah, who had been seconded for some three years to Trinidad? And remember the picture which accompanied the story?

It was a picture of Mr. Shah, all right, but not the one in the story. The picture of the gentleman in question appears **below**.

The man whose picture appeared in the August issue, if you're still with us, is that of Dr. G. M. Shah, an atmospheric physicist who has carried out research in ozone and twilight sky illumination in India under the well known scientist Professor K. R. Ramanathan. He was here on a fellowship from 1964 to last August, doing research at Met's atmospheric research section in Toronto. He evidently liked it here, for he applied to come back to a permanent position with his family and an offer has been made to this extremely well qualified scientist. He is expected to initiate and head a research program on airglow and aurora in the atmospheric research section.



A. J. SHAH

Dancing Her Way Through Europe

Aileen Ormsby, home this summer for a holiday with her parents, St. John District Marine Agent and Mrs. E. O. Ormsby, has returned to Vienna. She is currently under contract to the Raiamund Theatre in the Austrian capital.

Plies, battements and arabesques may not convey anything to the uninitiated, but to those who have studied the dance, it is the language of ballet.

Twenty-five-year-old Aileen always loved dancing, but didn't begin studying until she was 16, which is "late in life" as far as ballet is concerned. The Ormsby's were living in Port Arthur at the time and Aileen had a friend who took lessons and interested her.

Aileen took her first lessons in Toronto from Betty Olliphant, who now heads the National Ballet School. After several years of hard work and practice, Aileen went to England where she continued her studies and joined the corps de ballet of several travelling companies.

Originally going to study, she stayed on because there's more work for dancers in England and Europe than in Canada.

"It is getting harder every year to become a ballet dancer—there are better trained, more attractive people coming up all the time" she says.

She has danced modern, jazz and classical ballet and has performed in operettas, operas, musicals and classical ballets. On occasion she also sang in some of the productions. She has appeared in ballets from Daphnis and Chloe to Swan Lake, operettas such as the Bartered Bride and the musical "How to Succeed in Business Without Really Trying."

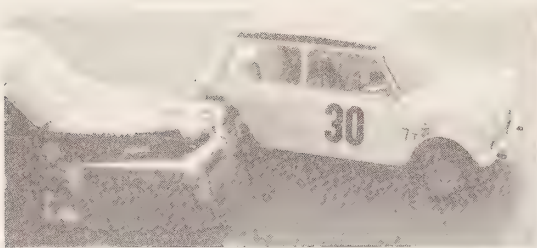
"Some classical dancers look down on dancers like myself who don't do only classical work", says Aileen, "but I enjoy what I do and that is the main thing."

She has performed in England, Monaco, Sweden and now in Austria.

"I love travelling and learning languages," said Aileen, who can speak French, German and Swedish. When touring with a company she spends the late morning and early afternoon rehearsing and the late afternoon sightseeing. The usual mode of travel is by bus and this is when she pursues her only hobby, knitting.

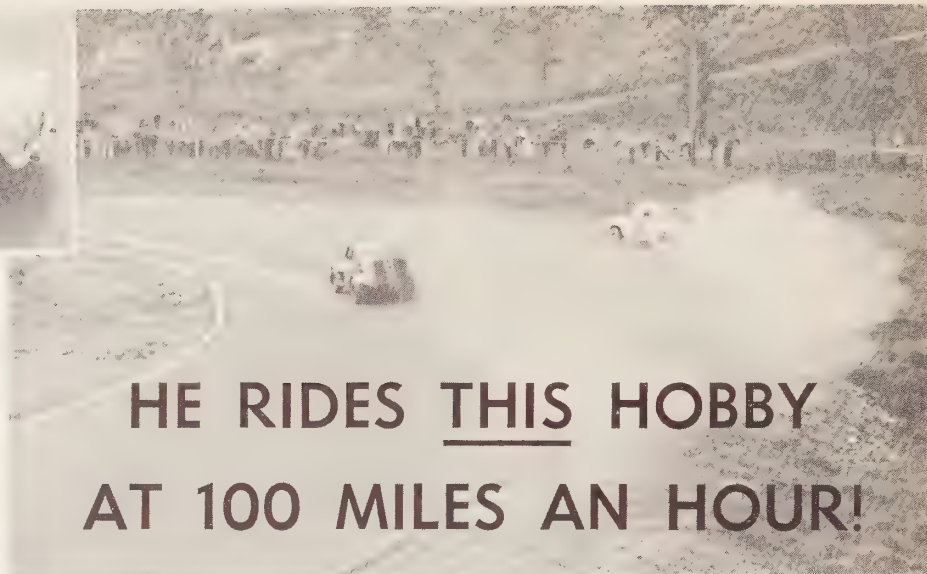


Aileen Ormsby, daughter of Captain E. O. Ormsby, Saint John district marine agent.



Ted Powell is driving car 30, above, at the moment of impact from a supercharged Volvo which spun it off the track. Having kept control of the car in evading tree stumps and other obstacles, right, he drives back onto the track split seconds later.

Ted Powell est au volant de l'auto 30, ci-dessus, au moment de la collision avec la Volvo. Sous le choc, sa voiture est projetée hors de la piste. Il conserve la maîtrise, et, après avoir surmonté les obstacles sur son chemin, à droite, il revient sur la piste quelques secondes plus tard.



HE RIDES THIS HOBBY AT 100 MILES AN HOUR!

A speeding car bumped Ted Powell's sedan racer and sent it careening off the track at a 100-mile-an-hour clip. Scant seconds and much skilled driving later, he manoeuvred his 1275 c.c. Austin Cooper "S" back off the gravel shoulder, still very much in the running.

It was an example of the cool nerve and efficiency developed in four years of off-duty racing by the superintendent of programs in D.O.T.'s Telecommunications and Electronics Branch.

Auto racing today is an exciting and popular sport, not just for the drivers themselves but for spectators. A recent race at the Circuit Mont Tremblant, St-Jovite, Quebec, where Ted Powell does most of his driving, drew a crowd of 56,300—more than any other sports event in the province.

Ted is active in association work as well as driving. He is vice-president of the Quebec Region and a past-president of the Motorsport Club of Ottawa, which is one of 25 members of the Canadian Automobile Sport Clubs in the Quebec Region. The region includes about 170 licensed racing drivers.

Club members race mainly for trophies, with occasional token payments toward expenses of the winners. Ted has a fair share of trophies and a number of extremely flattering press clippings about his driving feats. He is currently runner-up in the regional championships and tops his own club for the third year in a row.

In addition to driving Ted is, of course, extremely interested in keeping his car in perfect running condition. He does all his own mechanical work, ably assisted by his wife both in the garage and at the race track.

Although he began driving only four years ago, Ted Powell cannot remember a time when he was not closely associated with automobiles. His father, a mechanical engineer and inventor, was once a test driver for such early giants of the motor industry as R. S. McLaughlin and Henry Ford. He tells fascinating tales of the old days when he used to drive a Model T at full speed, with a man standing on each running board to keep the chassis from falling apart.

Born in Quebec City, Ted grew up in Jamaica where his father went to manage a family bread business. There always were several cars around the home, however, and Ted helped his father to keep them in shape and test them from time to time.

Next move was to England, where he took a degree in Electrical Engineering from Faraday House Engineering College. The cars were not forgotten, however. For some time he worked in the pit for Freddy Dixon, a famous racing driver of the era, at the renowned Brooklands track in Surrey.

The Second World War arrived about the same time as Ted's graduation and he spent the next six years as aircrew in the Royal Air Force. After the war he worked for some years with the Philips electronics group of companies and then worked as a regional engineer for the Government of Malaya until that country's independence in 1957. A world-wide tour convinced him that the land of his birth offered the most promising future and he came to Canada to live, settling in Ottawa.

Racing has not been permitted to interfere with an extremely active career with heavy responsibilities. Ted was in Geneva for two months early this year, leading the Canadian delegation to a conference of the International Telecommunications Union. He also headed the delegation to the International Civil Aviation Organization's meeting of its Communications and Operations Division at Montreal last October.

He has had other hobbies. At the age of 14, he was a member of Jamaica's small bore team of marksmen engaged in inter-colonial competition. He was runner-up for the Jamaican boy's golf championship and an ardent photographer, but racing is his current fascination.

As a driver, Ted prefers the race track. City traffic makes him nervous because so many drivers are unpredictable. To all motorists he recommends caution and the habitual use of seat belts.

UN PASSE-TEMPS ...à 100 milles à l'heure

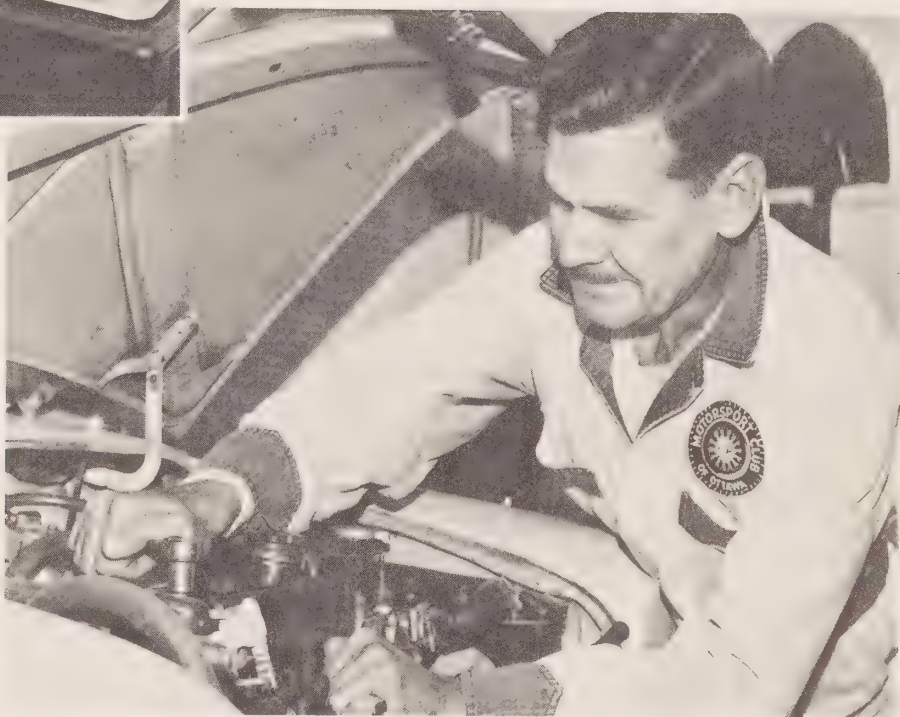
Ted Powell se sent beaucoup plus à l'aise et en sûreté au volant de sa voiture à 100 milles à l'heure sur une piste de course qu'à 30 milles à l'heure dans la circulation achalandée de la ville.

En dépit de la vitesse à laquelle ils conduisent, les chauffeurs sur une piste de course, précise Ted, sont, en général, plus prudents au volant que la majorité des automobilistes sur nos routes. C'est qu'ils sont en tout temps conscients du danger qui les guette et connaissent à fond toutes les règles de sécurité.



Sai Loong (Happy Small Dragon), a mascot who attends every race, sits among a few of the many prizes Ted Powell has won as a racing driver.

Sai Loong, mascotte qui accompagne son maître aux courses, est photographié au milieu de quelques-uns des trophées remportés par Ted Powell.



Ted Powell does practically all his own motor work. His wife frequently assists him, often working for him in the pit during races.

Ted Powell, mécanicien à ses heures, fait lui-même à peu près toutes les réparations et ajustements nécessaires au moteur de sa voiture. Sa femme se prête également à ce genre de travail et lui est d'un précieux secours.

E. B. "Ted" Powell est surintendant des programmes à la Direction des télécommunications et de l'électronique du ministère des Transports. Depuis sa tendre enfance, il s'est toujours passionnément intéressé aux courses d'autos. Son père, mécanicien et inventeur, fut jadis chauffeur d'essais pour certains magnats de l'auto, comme R.S. McLaughlin et Henry Ford, alors que l'industrie automobile n'était encore qu'à ses débuts. Ted se souvient qu'il y avait toujours quelques autos dans l'entrée de cour de la maison paternelle. Souvent, il montait aux côtés de son père quand une nouvelle voiture était mise à l'essai.

Malgré l'intérêt qu'il a toujours porté à ce sport, Ted ne participe lui-même activement aux courses que depuis quatre ans. Déjà, cependant, il s'est taillé une réputation enviable dans les milieux sportifs et a décroché plusieurs trophées. Il s'est récemment classé bon second dans des championnats régionaux et il demeure en tête de son propre club, le Motorsport Club d'Ottawa, pour la troisième année d'affilée.

Ted est un ancien président du Motorsport Club et est actuellement vice-président des Canadian Automobile Sport Clubs, région du Québec. Cette région compte environ 170 chauffeurs d'autos de course.

C'est à l'ancienne piste d'atterrissage de St-Eugène que Ted a participé à ses premières épreuves au volant de sont Austin Cooper "S". Des bottes de foin servaient à indiquer le parcours sur la piste d'atterrissage. Plus tard, le Motor Racing Club de Montréal a aménagé une excellente piste à St-Jovite. Une

épreuve récente au Circuit Mont-Tremblant a attiré pas moins de 56,300 spectateurs.

Né dans la ville de Québec, Ted a cependant passé son enfance en Jamaïque où son père avait été appelé à prendre en main une entreprise familiale. Eventuellement, la famille s'est retrouvée en Angleterre où Ted a décroché son diplôme d'ingénieur électricien.

Quand la Seconde guerre mondiale s'est déclarée, Ted s'est joint à la RAF. Après la guerre, il a travaillé pour un temps dans diverses succursales de la compagnie Philips, puis il est passé au service du gouvernement de la Malaisie à titre d'ingénieur régional jusqu'à la proclamation de l'indépendance de ce pays en 1957. Il s'est convaincu au cours de ses nombreux voyages de par le monde que son pays d'origine semblait renfermer les plus riches promesses d'avenir. Il est donc revenu au Canada et s'est établi à Ottawa.

Ted n'a tout de même jamais laissé son enthousiasme pour les courses nuire à sa carrière et aux lourdes responsabilités qu'il assume au ministère. Au début de cette année, il a séjourné deux mois à Genève à la tête de la délégation canadienne à la conférence de l'Union internationale des télécommunications. En octobre dernier, il a dirigé une autre délégation à une réunion de l'Organisation de l'aviation civile internationale à Montréal.

Les courses d'autos, pour lui, demeurent cependant un passe-temps qu'on ne saurait comparer à aucune autre forme de divertissement, et il y consacre presque toutes ses heures de loisir.



Second-year cadets at the Canadian Coast Guard College are Pierre Levasseur, left, of Trois Rivières, Quebec, and Donald Kemp Ross of St. Peter's, Cape Breton, Nova Scotia.

Les cadets Pierre Levasseur, à gauche, de Trois-Rivières, P.Q., et Donald Kemp Ross, de St. Peter's, Cap Breton, Nouvelle-Ecosse, sont en deuxième année de leur cours au Collège de la Garde côtière.



The Minister, accompanied by Captain J. G. Brie, chats with Cadet K. H. Goguen of Newcastle Bridge, N.B. Others shown are Cadet M. D. Moody, Vancouver, B.C., left, and Cadet B. M. Thomson, Hamilton, Ont.

Le ministre, en compagnie du capitaine J. G. Brie, s'entretient avec le cadet K. H. Goguen, de Newcastle Bridge, N.-B. Les autres dans la photo sont le cadet M. D. Moody, de Vancouver, à gauche, et le cadet B. M. Thomson, de Hamilton, Ont.

Commodore Eric Brand, former director of D.O.T.'s marine operations, presents the Brand trophy to Cadet Captain Larry Johnston, Montague, P.E.I., who accepts on behalf of Macdonald division.

Le commodore Eric Brand, autrefois directeur des opérations de la marine au ministère des Transports, présente le trophée Brand au cadet capitaine Larry Johnston, de Montague, I.-P.-É. Le trophée est accordé à la division Macdonald.



Coast Guard College Opened by Minister

by Ken Parks
Information Services Division

While 77 smartly-turned-out cadets and more than 200 residents of the Sydney, N.S. area looked on, Transport Minister J. W. Pickersgill officially declared the Canadian Coast Guard College open in an impressive ceremony in the college drill hall on Saturday, September 24.

The event had as its climax the lighting by the minister of two buoys, marked "Macdonald" and "Cartier", respectively, for the two divisions of the college, outside the entrance to the administration building. This took place when Mr. Pickersgill pressed a switch at the speakers' stand at the close of his remarks.

The Minister was accompanied on the platform by Hon. H. J. Robichaud, Minister of Fisheries. In keeping with the bilingual nature of the college program, both Mr. Pickersgill and Mr. Robichaud, as well as Captain J. G. Brie, director of the college, and other speakers, addressed the gathering in both English and French. Captain Brie acted as master of ceremonies. Rev. Charles McIsaac, Roman Catholic chaplain for the college, and Rev. David Lennerton, acting in the absence of the Protestant chaplain, Rev. R. Hutcheson, led in prayers at the opening of the ceremony.

Expressing his keen personal interest in the Coast Guard College, Mr. Pickersgill outlined the planning and development of the institution as a means of filling the urgent need for provision of a source of adequately trained officers for the coast guard. The service is concerned with a variety of highly specialized operations in the realms of icebreaking and lighthouse supply and buoy tending, as well as search and rescue. In the past the Coast Guard had been forced to draw its officer material from other fields of marine experience which did not provide an adequate background.

Mr. Pickersgill was pleased with the great strides that had been made already by the college, and with the high calibre of the young men who were beginning their seafaring careers there.

Mr. Robichaud stressed the importance of the part the college would play in the development of a great tradition for the Coast Guard of the future. He paid tribute to the Coast Guard's important role in support of the Canadian fisherman and of the Canadian shipping industry as a whole.

Mr. Pickersgill was introduced to the assembly by Deputy Minister Baldwin and following the official act of opening, the awarding of prizes took place.

The Stead Trophy, presented by Gordon W. Stead, Assistant Deputy Minister, Marine, was awarded to the first-year student rated highest in all-round performance, Chief Cadet Captain David George Parkes of Quebec city. Chief Cadet Parkes received from Mr. Stead, in addition to the plaque, a valuable marine technical book as a permanent memento.

The Brand trophy, to be awarded annually to the better of the College's two divisions, was presented by Commodore Eric Brand, former Director of Marine Operations for the Transport Department, to Macdonald Division and was accepted on behalf of the division by Cadet Captain Larry Johnston, of Montague, P.E.I.

The Middleton Trophy, for the cadet showing greatest improvement during the year, awarded by R. R. Middleton, headquarters supply officer, went to Cadet Pierre Lavasseur of Trois Rivières.

At the close of the ceremony, Captain Brie accompanied the ministers on an inspection tour of classrooms and shops. Other guests also toured the college, with the cadets acting as guides. Refreshments were served later in the wardroom to bring the day's activities to a close.

Le Collège de la Garde côtière inauguré à Sydney

Quelque 200 citoyens de la région de Sydney, N.-É., et de nombreux dignitaires venus de divers endroits au Canada et même des États-Unis ont assisté, le 24 septembre dernier, à l'ouverture officielle du Collège de la Garde côtière canadienne à la base de Point Edward. En grande tenue, les cadets du collège assistaient également aux cérémonies présidées par le ministre des Transports, l'honorable J. W. Pickersgill.

Comme geste officiel marquant l'ouverture, le ministre a appuyé le doigt sur un commutateur, allumant les feux clignotants de deux bouées installées à l'entrée de l'édifice logeant les services administratifs du collège. Ces bouées portent les noms des deux divisions du collège, soit «Macdonald» et «Cartier».

Sur la tribune des orateurs, le ministre Pickersgill était accompagné du ministre des Pêcheries, l'hon. H. J. Robichaud. En accord avec le caractère bilingue de l'institution, MM. Pickersgill et Robichaud ainsi que le directeur du collège, le capitaine Gérard Brie, et les autres invités d'honneur ont parlé dans les deux langues. Le capitaine Brie agissait comme maître de cérémonies. L'abbé Charles McIsaac, aumônier catholique du collège, et le révérend David Lennerton, en l'absence de l'aumônier protestant, le révérend R. Hutcheson, ont prononcé les prières de dédicace au début de la cérémonie.

Le ministre Pickersgill a exprimé son vif intérêt personnel dans l'avenir du collège. Il a parlé du travail d'organisation qui a précédé la création de l'institution et a insisté



Les cadets Jean Maillette, à gauche, de Trois-Rivières, P.Q., et J.-Alain Canuel, de Ste-Foy, P.Q., ont entamé leur deuxième année d'entraînement au Collège.

Cadets Jean Maillette, left, of Trois Rivières, Quebec, and J. Alain Canuel, of St. Foy, Quebec, are in their second year of training.



M. Gordon W. Stead, sous-ministre adjoint pour la marine, présente le trophée Stead au cadet capitaine en chef David George Parkes, de Ste-Foy, Québec.

Gordon W. Stead, assistant deputy minister, marine, presents the Stead trophy to Chief Cadet Captain David George Parkes, Ste Foy, Quebec.

sur le rôle qu'elle est appelée à jouer comme école de formation des futurs officiers de la Garde côtière. Ce service s'adonne à des tâches hautement spécialisées dans les domaines du déglacage, du ravitaillement dans l'Arctique, du balisage ainsi que dans les opérations de recherches et de sauvetage.

M. Pickersgill s'est dit particulièrement heureux des progrès accomplis par le collège depuis sa fondation, il y a un an, et a fait l'éloge des cadets qui sont actuellement à l'entraînement.

M. Robichaud, de son côté, a insisté sur l'importance du rôle que le collège est appelé à jouer dans les projets d'avenir de la Garde côtière. Il a parlé également de l'apport de la Garde côtière aux pêcheries et à la navigation en général.

Le ministre Pickersgill a été présenté à l'assistance par le sous-ministre des Transports, M. J. R. Baldwin. Immédiatement après l'ouverture officielle avait lieu la présentation de prix et trophées aux cadets.

Le trophée Stead, présenté par le sous-ministre adjoint pour la marine, M. Gordon W. Stead, a été décerné au cadet capitaine en chef David George Parkes, de Québec. Le trophée sera accordé annuellement au cadet le plus méritant de première année. En guise de souvenir, le récipiendaire conservera un magnifique volume portant sur des questions de la vie en mer.

Le trophée Brand, destiné à la meilleure division du collège, est allé à la division Macdonald. Le commodore Eric Brand, ancien directeur des opérations de la marine au ministère des Transports, a fait la présentation au cadet capitaine Basil Larry Johnston, de Montague, Île-du-Prince-Édouard.

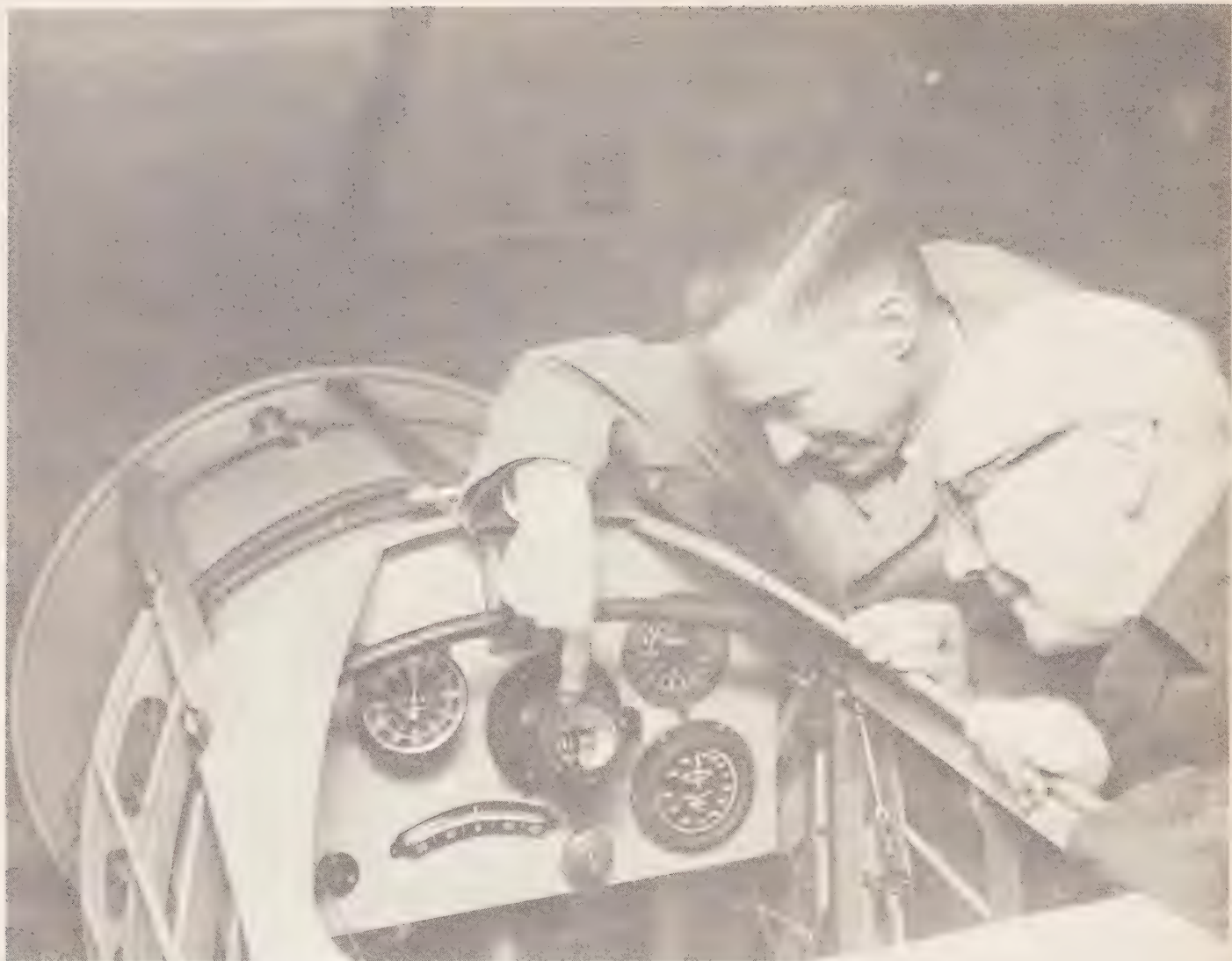
Le trophée Middleton, au cadet dont les progrès ont été les plus remarquables au cours de l'année, a été décerné au cadet Pierre Levasseur, de Trois-Rivières. La présentation a été faite par M. R. R. Middleton, agent d'approvisionnement des navires au ministère des Transports.

A la fin des cérémonies, le capitaine Brie a dirigé les ministres et principaux dignitaires dans une tournée des diverses salles de cours et autres installations sur le campus. Les autres invités ont également visité les édifices en compagnie des cadets et du personnel enseignant. Une courte réception a mis fin au programme.



M. Ronald Middleton, d'Ottawa, agent d'approvisionnement des navires, présente le prix Middleton au cadet Pierre Levasseur, de Trois-Rivières, P.Q.

Ronald Middleton, headquarters supply officer, Ottawa, presents the Middleton award to Cadet Pierre Levasseur, Trois Rivières, P.Q.



Regional Airworthiness Inspector David Bell, who has had some 40 years experience as a D.O.T. inspector, examines the full-scale replica of a Sopwith Pup being built by George Neal, a DeHavilland test pilot who intends to fly it. Mr. Bell used to do mechanical work on this type aircraft before he left England.



Airworthiness Inspector T. A. Parry checks nose landing gear on FanJet Falcon after its importation by Imperial Oil Company.

Toward Safer Aircraft

by William Dunstan
Information Services Division

A cartoon of some years ago shows a huge aircraft crashing and the pilot bailing out before a crowd of dignitaries while the aircraft designer walks away with the bland comment, "Well, back to the drawing-board."

That things do not happen that way is due largely to continuous advances in the knowledge of flight and in pretesting techniques which leave an ever-decreasing margin for guesswork.

Much also is due to the efforts of D.O.T.'s aeronautical engineering division, civil aviation branch, in ensuring, among other things, that aircraft built or licensed in Canada comply with suitable airworthiness requirements.

Before commencing detailed planning for a new aircraft, or modification of an existing one, manufacturers must have D.O.T. approval, based on airworthiness requirements. There are further checks and tests throughout construction and in modern experience the incidence of a crash during a civil aviation development program is almost unknown.

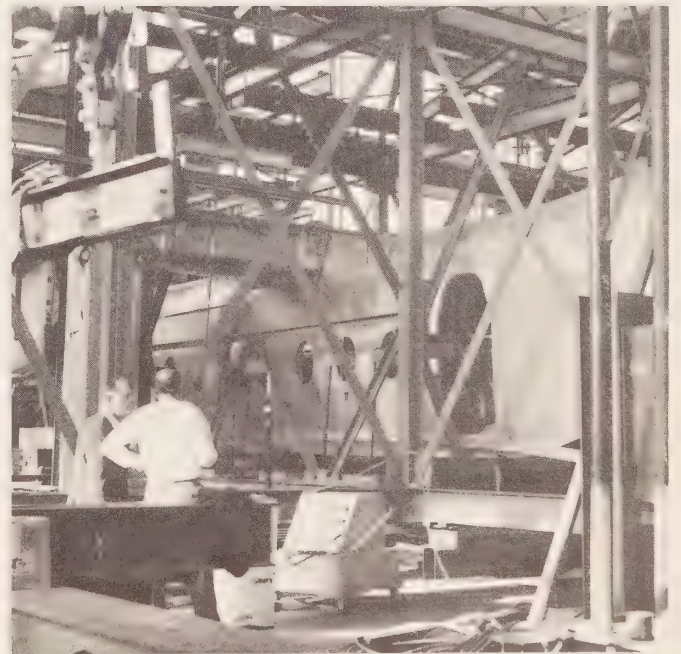
Under Chief Aeronautical Engineer Walter McLeish, whose professional experience totals 27 years in aviation including the R.C.A.F., and a Master of Engineering degree, four distinct functions combine to help ensure airworthiness of Canadian civil aircraft.

The airworthiness requirements section, at headquarters, is responsible for writing and preparing for publication various specifications concerning construction, maintenance, repair and overhaul of aircraft. This section, which includes five writers and specialists, generally draws on technical advice and recommendations from other parts of the division and the aviation public.

Design approval, required for modifications as well as new designs, is carried out both at headquarters and in the regions. The regional aeronautical engineer may recommend approval in cases which do not require intensive scientific testing and calculations. Larger jobs which demand many specialists usually are done by headquarters staff. These activities involve about 10 engineers at headquarters and nine engineers in the regions, including two engineers in busy areas such as Toronto and Montreal and one in each of the less active regions.

Airworthiness checks are performed by regional airworthiness inspectors to ensure that aircraft construction or modifications conform with the approved design. About 45 inspectors are engaged in this function.

Inspectors also check to ensure that maintenance and overhauls are done correctly at the required intervals. Regulations call for inspection by D.O.T. inspectors of all civil aircraft once a year and approximately 80 per cent of this requirement is met. The shortage is due to the remoteness of some of Canada's 8,000-odd aircraft and an extremely small percentage of operators who may evade inspections for one reason or another. They do not succeed for long, however, because inspectors take great pains to ensure that no licensed aircraft goes unchecked for two years in a row.



Above, Airworthiness Inspector A. A. Empey (behind) and DeHavilland Test Engineer G. L. Thomas examine structure of DHC-5 Buffalo fuselage during static test. Below, they observe left side of DHC-5 fuselage as load is supplied during static test.

In most regions, operations of both the engineers and inspectors are administered by a regional superintendent aeronautical engineer.

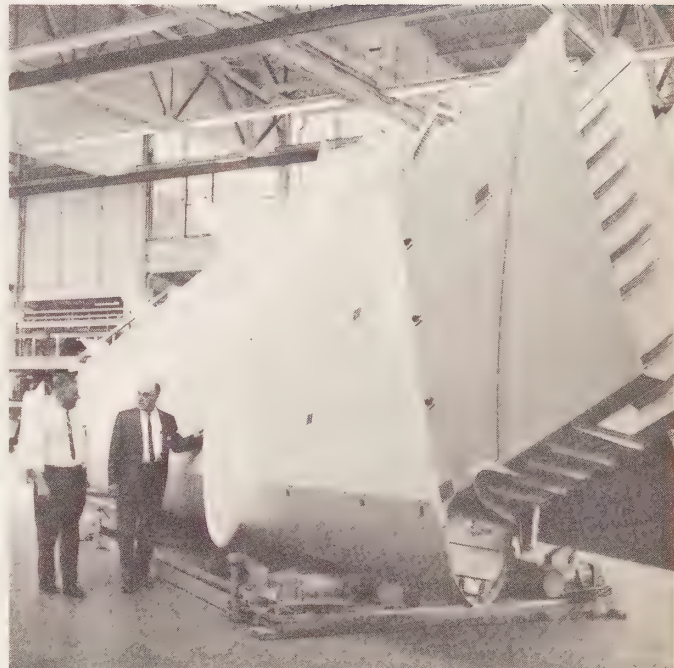
With the increasing range and number of civil aircraft throughout the world, internationally acceptable safety standards are becoming increasingly important. As possessor of the world's second-largest total of civil aircraft—second only to the United States—Canada naturally takes an active part in discussions and negotiations in this matter.

Mr. McLeish is Canada's delegate on the airworthiness committee of the International Civil Aviation Organization. Membership on the committee includes 10 countries and two international organizations—the International Air Transport Association and the Federal Airline Pilot's Association. Expert advisors on his staff frequently attend meetings, for which presentations are prepared by the airworthiness requirements section.

Since a large part of Canada's aircraft requirement is built in other countries and some Canadian-built planes and parts are exported, international agreements on standards are necessary. Canada has no design regulations of its own at present and manufacturers currently must follow those of either the United Kingdom or the United States. Neither set takes full account of the climate or other flight factors peculiar to Canada, of course, and progress is being made toward the development of purely Canadian regulations but based largely on those of other countries. It will be necessary, of course, to negotiate agreements to ensure that such Canadian standards will be acceptable elsewhere.

In the aircraft industry, where technology and expansion are progressing at a spectacular rate, it is not sufficient merely to follow a set of inflexible requirements. It is necessary to keep up to date with the latest technology and the most sophisticated testing procedures. To this end, Mr. McLeish would like to inaugurate professional exchanges for tours of duty with comparable organizations in the United Kingdom and the United States so that we can profit from the advanced technology of those countries. He and his colleagues currently try to keep abreast of developments through study, professional conferences, and observation of various testing procedures. The aeronautical laboratory of the National Research Council is of great value in providing them with the latest information and specialized data.

He gives much credit for growing aircraft safety to the manufacturing companies which finance a great deal of research and make their knowledge freely available to D.O.T.



Above and below, Airworthiness Inspector W. L. Brown and Douglas Superintendent Inspector M. Boyd (in shirtsleeves) examine a completed DC-9 wing prior to shipping from Toronto to Douglas Aircraft, Long Beach, California for assembly of the complete aircraft.

Smile, Met — You're on Candid Camera!



Paul Leach, National Film Board, photographs a sunshine recorder for use in a film on met activities.

The Meteorological branch is "on camera" these days as a National Film Board crew, under writer-director J. J. Carney, prepares a feature film in color of its activities.

Under the working title *In One Day*, the film is intended to tell something of the diverse activities throughout Canada in which our weathermen are engaged in the course of a typical day.

Shooting so far has taken the crew on ice reconnaissance out of Frobisher; to Montreal; to Baie du Dore, Beatrice, Burlington, and Toronto, Ontario; to Churchill, Manitoba; Marmot Creek and Penhold, Alberta; Victoria and Old Glory, British Columbia. At press time, they were at Eureka, North West Territories, having gone in the new ice reconnaissance aircraft featured in this issue. Final major sequences to be taken will be of icebreaker activities off Sable Island and the Labrador coast.

Notes on the filming contain the *amazing* information that the crew kept encountering weather quite contrary to requirements, despite the "authoritative auspices": Rain wanted at Burlington was found at Marmot, where not wanted; at Penhold to shoot hail research—no hail; at Churchill for rocket-sounding, too much wind wiped out two shoots, but after the disappointed N.F.B. crew departed, this mocking wind abated; at Baie du Dore stiff breezes nearly ruined the filming, and cameramen, clambering from catamaran to tower, risked life and limb for difficult shots; aboard the helicopter filming the weathership the wind, coming through the open door, blew the lens shutter down a stop unknown to the cameraman who, on landing and learning, feared the worst.

This film, which is expected to do a great job of informing the public of weather services available and the enormous research and scientific activities involved, is scheduled for release next July.

Cross-Canada Dateline

Toronto—Met Director J. R. H. Noble was elected president of World Meteorological Organization's regional association IV, which includes both North and South America, at its fourth annual meeting in Asheville, North Carolina, last October. Mr. Noble, who will hold office for four years, succeeds Ing. Elliott Coen of Costa Rica. The new vice-president is Ing. Juan Mas Sinta, Mexico's permanent representative to W.M.O.

Mr. Noble thus becomes a member of the executive committee of W.M.O., which meets annually in Geneva, Switzerland.

Port Hardy, B.C.—D.O.T. has asked Canadian Wildlife Service to study the eagle problem following the grounding of a four-engine DC6 by one of the pugnacious birds last October. The eagle punched an 18-inch hole in the left wing. The department hopes it won't have to shoot any of these big, rare birds but when it finds out what attracts them, it might know how to shoo them.

Mill Village, N.S.—Satcom, Canada's first satellite communications station, built for D.O.T. at a cost of more than \$9,000,000 last month entered commercial operations under the Canadian Telecommunications corporation. It will relay transatlantic telephone and television signals to and from Early Bird satellite on a regular schedule.

Edmonton—J. R. L. "Chip" Murphy, Edmonton, whose retirement after 18 years with D.O.T. was announced in our July-August edition, has launched a new career with his admission to the Alberta bar early in October.

To Chip, who practiced law in Saskatchewan from 1925 until he joined the R.C.A.F. in 1942, *The DOT* sends best wishes for success on behalf of all his old associates in the department.

(see also page 22)

Mobile Towers Promote Safety at Small Airport Fly-ins

A rubber-tired control tower has clocked some 30,000 miles since June 4, 1960, when it first broadcast the voice of the late R. C. (Dick) Wood, genial unit chief, Edmonton Industrial control tower, to control fly-ins and air shows throughout the Edmonton region at airports which lack towers.

The "tower" is an automobile equipped with a portable Collins transceiver capable of transmitting and receiving on any frequency in the VHF spectrum and a fixed-frequency PYE set transmitting and receiving on 121.9 mcs. A standard three-colour light gun and binoculars also are carried.

Similar vehicles are used in the Vancouver, Winnipeg, Montreal and Moncton regions.

The first job in the Edmonton region was a fly-in at Wainwright, where Dick Wood superintended a total of 200 landings and take-offs. Dick, continued to supply services requested for the unit, which now has conducted more than 70 fly-ins throughout the region, until shortly before his death last October 30.

An air traffic controller since 1941 and a unit chief of control towers since 1947, Dick was well known and respected by the flying public throughout western Canada, and an obvious choice for this demanding job. Confirmation of this was given voluntarily by many pilots who found that the familiar, cheerful voice issuing control instructions and offering assistance on many occasions helped allay apprehensions in landing or taking off in unfamiliar surroundings.

One of many incidents is well remembered by a pilot who, on receiving landing instructions, made his approach for the wrong

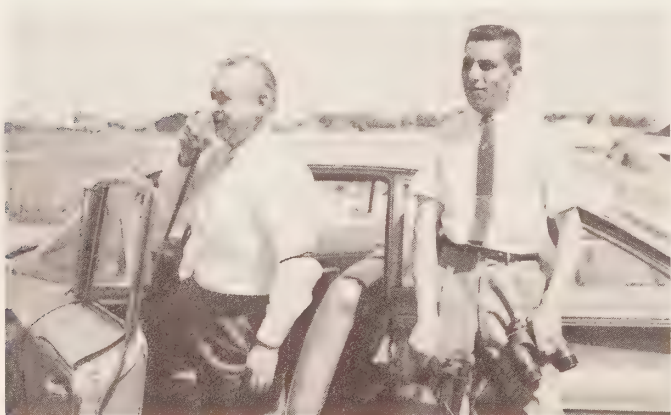
runway—right in line with a high tension power cable. Years of experience had taught Dick to scan all possible approaches and he detected the danger in time to make the pilot pull up. The shaken pilot confessed he had not seen the cable and most certainly would have crashed into it.

The Moncton vehicle was first used in 1959 at New Glasgow, N.S., during the royal visit. Control services were extremely useful, as the royal aircraft and three conducting planes had to land in fog. Other uses have included the opening of an airport at Charlo, N.B., assistance to a D.O.T. flight in and out of Pennfield Ridge, N.B., and at Charlottetown during the royal visit of 1964.

The Vancouver unit is equipped with light signal guns, emergency flares, fire extinguishers, VHF radio facilities and heavy duty alternator to power the electrical gear. It has been used on a number of occasions for fly-ins and air shows at Pitt Meadows, Kamloops, Abbotsford and Penticton airports, using available controllers from Vancouver tower or centre.

Winnipeg region has a specially equipped station wagon on order, but in the meantime is using a civil aviation station wagon with a Collins transceiver.

Services have been provided for a fly-in breakfast at Brandon, where H. G. Batt and J. L. McCallum of the Winnipeg tower assisted traffic consisting of 202 itinerant and 68 local movements, and an air show at Weyburn, Sask., where Mr. Batt and M. Hudson, also from Winnipeg tower, handled a total of 460 movements during the two-day event.



Unit Chief R. D. Wood, Edmonton Industrial Tower, handles the microphone while Controller J. Bell, Calgary tower, stands by with light gun and binoculars.

MÉTÉOROLOGIE

*carrières pour
les diplômés d'université*

A CAREER
in air traffic control

The
Canadian
Coast
Guard
Officer
Cadet
Training
Plan

Career Booklets Help D.O.T. Recruiting Drive

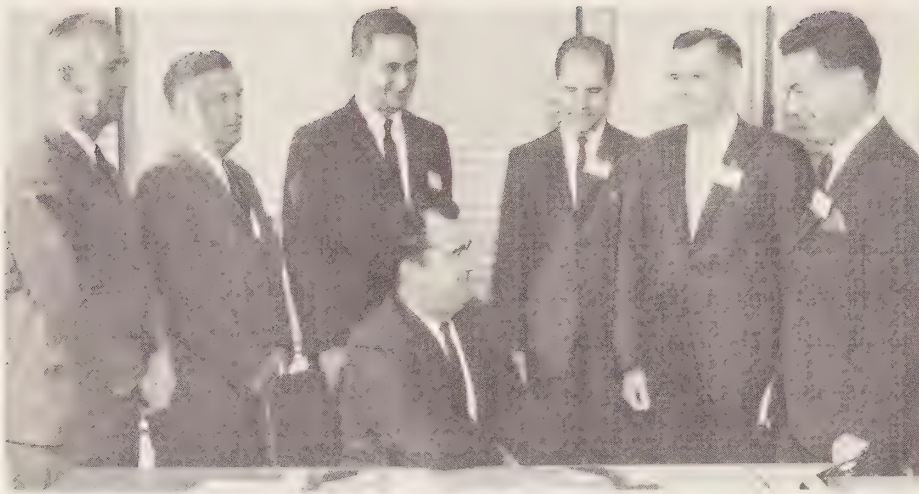
Three handsome new booklets are among the signs of D.O.T.'s intensified program for recruiting new staff. They are *Meteorology*—*Career Opportunities for University Graduates*; *A career in Air Traffic Control*, and *The Canadian Coast Guard Officer Cadet Training Plan*. Still others are being planned.

Time was when employers were content to sit back and wait for young hopefuls to knock on the door—but not any more. D.O.T. has much to offer in careers, but so have other departments and various industries. Many of these are carrying their recruiting efforts onto the campus and into trade schools, crea-

ting stiff competition by such means as handsome brochures and counselling officers.

The Civil Service Commission, which is the federal government's official recruiting agency, works closely with the appropriate divisions of D.O.T. in gathering pertinent information for its recruiting officers.

D.O.T.'s assistance has been so outstanding that at least one branch has worked itself into a job. This year, for the first time, the Meteorology branch is supplying its own officers for a recruiting drive under the supervision of its personnel division.



J. B. McDermott, who directed Administrative Telecommunications Agency's first telecommunications service officers' course in Ottawa this fall, chats with his assistant, J. E. Baigrie, left, and class members, left to right, R. Kirk, Ottawa; H. Lawson, Toronto; R. Paquin, Montreal; L. Shearer, Winnipeg, and G. Morgan, Edmonton.

First Telecommunications Service Officers' Training Course

Administrative telecommunications agency, which was set up under D.O.T. February 1965 as a result of the Glassco commission report, last September sponsored its first training course for telecommunications service officers who will assist its rapidly expanding activities.

These officers since have taken up their responsibilities in advising government departments of their telecommunications needs and administering the consolidated telephone system in their respective areas.

Mr. McDermott, A.T.A. commercial staff officer, is on contract loan from the Bell Telephone Company, where he specialized and instructed in inter-city service.

The course included briefings on telecommunications by officers of other departments. Communications seminars also were held in Bell Telephone Company quarters in Toronto and Montreal. The class also learned much in visits to various switching centres operated by Bell, Canadian National and Canadian Pacific railways.

Five Win Bursaries

Five sons of D.O.T. employees each received an award of \$500 toward first-year university expenses through the department's bursary plan. They were chosen from among 30 candidates by a panel of professional educationists. Awards are made annually to five children of D.O.T. personnel entering their first year of university.

Winners this year are as follows:

David Graham Potter, 18, whose father, J. G. Potter, is a meteorologist in Toronto. He is attending Waterloo University, where he will specialize in mathematics or physics.

Paul Garth Harrison, 17, whose father, Brian, is a radio inspector in Vancouver. He

is studying at the University of British Columbia for a career in marine biology.

Barry Stewart Mercer, 17, whose father, Lloyd, is an electrician at Gander International Airport. He is attending Memorial University of Newfoundland and intends to be an electrical engineer.

George Philip Engelberg, 17, whose father, Max, is a computing clerk for the National Harbours Board, Montreal. He is attending McGill University and plans to become an electrical engineer.

Archie Michael Zariski, 17, whose father, Victor, is a radio technician at Edmonton. He will major in History at the University of Alberta and intends to teach this subject as a university professor.

Ancien sous-ministre adjoint du Québec nommé aux Transports

Me J. Jacques R. Côté, ancien sous-ministre adjoint aux Transports et Communications du Québec, vient de passer au service du ministère fédéral des Transports à titre de préposé aux projets spéciaux. Il est attaché à la Direction des méthodes et des recherches en matière de transport.

Me Côté est reconnu comme une autorité dans les domaines du transport routier et de la sécurité routière. Il a eu l'occasion de participer à divers congrès internationaux sur ces sujets, dont certains en France, en Allemagne, en Autriche, en Suisse, au Belgique, en Espagne, aux États-Unis et au Canada.

Né à Lévis, Québec, Me Côté est diplômé en droit de l'Université Laval. Il détient également un diplôme en sciences sociales. Il est marié et père de deux enfants.

Former Quebec A.D.M. Joins D.O.T.

Jacques Côté, formerly Quebec assistant deputy minister of transport and communications, has joined D.O.T.'s special projects section of economic policy and research.

A recognized authority on highway transportation and traffic safety, Mr. Côté has attended international conferences on these subjects in several countries, including France, Germany, Austria, Switzerland, Belgium, Spain, the United States and Canada.

Born at Levis, Quebec, Mr. Côté has obtained degrees in law and social science from Laval University.

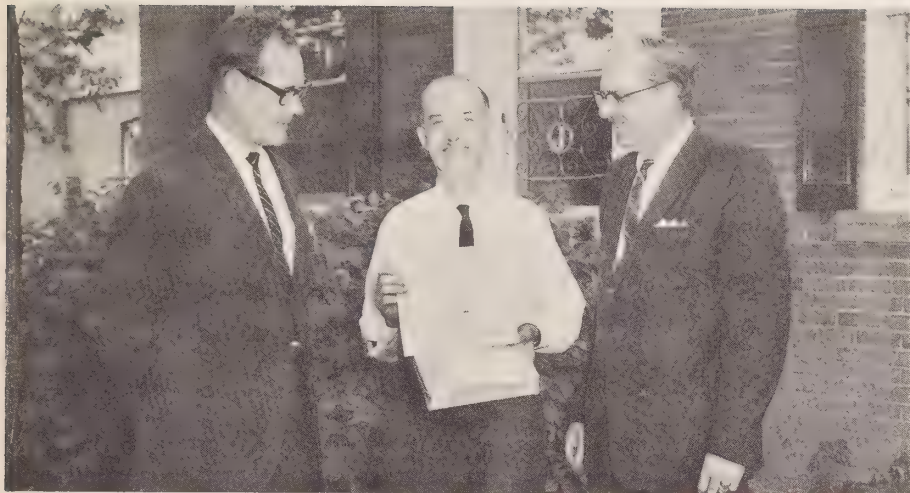
Delayed Retirement Finally Arrives

When A. J. Dawson, superintendent radio engineering, reached retirement age last March, D.O.T. asked him to stay for a special job.

He was asked to represent Canada, as he already had on a number of occasions, on the council of the International Telecommunications Union, an agency of the United Nations with headquarters at Geneva.

Last fall, after finishing his assignment, Mr. Dawson finally retired to live in Ottawa.

He first came to Ottawa in 1947, prior to which he worked for the department as a radio range operator in western Canada. Earlier radio experience was in the British wireless marine service as a sea-going operator.



Left to right: Larry Campbell, Floyd Budd, and J. R. H. Noble

Personal Service for Award Winner

An especially effective "get-well" visit was paid recently to Floyd Budd, an administrative officer of the Meteorological Branch, Toronto. Director J. R. H. Noble and Larry Campbell, chief of administration, visited his home to bring a gift from his colleagues, a certificate of achievement and a \$75 suggestion award. Floyd, who is now

back at work after a bout of illness, had suggested that shipments be made in double-walled corrugated cartons instead of wire-bound wooden boxes.

Other winners, their positions, locations, and the amount awarded, include the following:

D. E. Buckler	technician electronics	Windsor	\$50.
D. L. Smith	technician electronics	Ottawa	30.
G. N. O'Brien	stationery engineer	Halifax	20.
J. Preece	communicator	Toronto	20.
R. N. Anderson	radio operator	Vancouver	15.
D. L. Greene	radio operator	Comox, B.C.	10.
G. L. J. Picotte	radio operator	Beaumont, P.Q.	10.
R. E. Stiles	radio operator	Abbotsford, B.C.	10.

Lawrence Oakley Retires

L. A. D. Oakley, a radio inspector at Saint John, N.B., retired recently.

A native of North Battleford, Saskatchewan, Mr. Oakley joined the Department of Marine and Fisheries at Toronto in 1930 as a radio beacon operator. After four seasons on the Great Lakes, he joined the marine section of the R.C.M.P. in Halifax and served on various patrol boats.

In 1937 Mr. Oakley went back to the Department of Marine and for the next six

years served at coastal stations and on government ships. He was then appointed a radio technician at Moncton air services region. In 1954 he returned to marine services in Halifax as technician in charge of Hudson Bay stations. In 1961 he made his final move to Saint John, N.B. as a radio inspector.

Prior to his retirement Mr. Oakley was honored by his colleagues and presented with a set of luggage and other gifts.

"OUR" MAN in Grand Haven

Now, take a deep breath, because the following article from the Grand Haven Tribune, Michigan, U.S.A., may contain some surprising information:

"Commander Edwin Henry Lemeck, winner of the Victoria Cross of the Royal Canadian Navy, now in Grand Haven, aboard the Castle Rock doing research for the Royal Canadian Naval Department of Affairs on the cadets' visit to the Great Lakes and the Grand Haven Coast Guard Festival received the good news yesterday of his promotion to Captain in the Canadian Coast Guard Department of Transport.

"He will command the ice breaker *Oceanographer* which is a research and development and supply ship on the DEW line. The ship will sail in the North Atlantic and the Antarctic and is the largest Canadian ice breaker and third largest in the world. The ship will be commissioned on the 26th of the month in Montreal.

"He was also awarded the next cross in the order of the Cross of St. John as Companion of the Bath of the Order of Star and Garter. He is now Capt. Sir Edward Henry Lemeck. . . . He is well known in the Great Lakes, Canada and the Coast Guard areas as the "Canadian Coast Guardsman."

Grand Haven Chamber of Commerce brought the item to the attention of D.O.T. headquarters, for confirmation, pointing out that the "hero" of the story had ingratiated himself in the affections of a local widow and the community generally, running up substantial bills with local merchants.

D.O.T. replied that the name was unknown to the Royal Canadian Navy, the Canadian Coast Guard, and the St. John Ambulance Association, and that no Canadian of that name ever won the Victoria Cross. There is no such thing as an Order of the Star and Garter—this is the name of a pub in England. There is no Canadian icebreaker called *Oceanographer*.

What happened to the gullible merchants, we have no doubts—and the widow?

Tribute to Pioneer

Halifax paid tribute last October to Donald W. Saunders, a pioneer in Halifax aviation who was once airport manager there. A new park, on the site of the old Halifax municipal airport, was named for him in a brief ceremony during which he and the mayor unveiled a 15-foot monument.

Cross-Canada Dateline

New Westminster—CCGC "Racer" made itself pretty popular here through its prompt and vital services in helping to contain a \$10,000,000 waterfront fire which seriously threatened the city.

As soon as he heard of the fire, Coast Guard Rescue Officer J. C. Barbour rushed to the scene by auto from neighbouring Vancouver. At his signal Captain R. B. Rhymmer helped the cutter make good its name by racing some 25 miles to the support of two tugs which were fighting a losing battle with the spreading flames.

The cutter's fire monitors helped save valuable lumber and a large fuel storage tank and also helped provide a beachhead for firefighters on the dock. It also served as radio relay in guiding the passes of a water-bombing aircraft.

Racer pumped steadily from around seven in the evening to one in the morning, helping dispell the darkness with its floodlights and searchlights. Then two crew members got out of their firefighting gear and donned frogman outfits to clear a hose from the propellor of one of the tugs.

Still with no rest in sight, the cutter set out for Kitsilano Base to meet the first of some 17,000 fishermen setting out in the dark for the Sun Fishing Derby.

Bagotville, Quebec—We pass on, without comment, an extract from a recent report by our Canadian Forces weather office.

"Unusual requests—briefing for homing pigeon leaving Bagotville 091700Z, arriving Toronto approximately 091600Z with overnight stop at Montreal. Handler seemed worried about 20 kt. wind in Bagotville area. Forecaster unable to speak to pigeon."

On vous transmet, sans commentaire, la remarque suivante tirée d'un récent rapport du bureau météorologique des Forces canadiennes à Bagotville:

«Requêtes peu communes—aperçu du temps pour pigeon voyageur quittant Bagotville 091700Z, attendu à Toronto 091600Z, après un arrêt de nuit à Montréal. Des vents de 20 noeuds, région de Bagotville, semblent inquiéter le propriétaire. Impossible de communiquer avec le pigeon.»

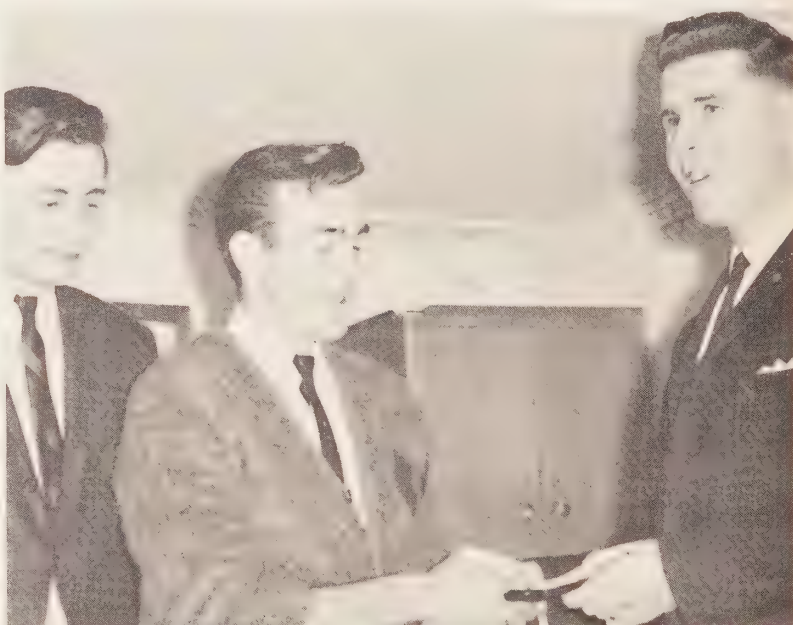


CCGS Racer

Queen Honours Brave Coast Guard Seaman

The Queen has commended a young seaman of the Canadian Coast Guard for brave conduct in saving one of the victims of a sea mishap in which a man died.

Last January 15, Seaman John James Haight, 22, tied a line round his waist and plunged into rough, frigid water off Egg Island, B.C., to pull ashore Michael Trim, a



John Haight receives the Queen's commendation from G. R. Stewart, Prince Rupert district marine agent, in the presence of Michael Trim, the man he saved.

John Haight, au centre, reçoit la décoration de la reine de l'agent de la marine G. R. Stewart, en présence de Michael Trim, celui qu'il a sauvé de la noyade.

fellow crew member of CCGS *Alexander Mackenzie*.

Mr. Trim was one of three crew members on a workboat unloading cement at the lighthouse on Egg Island, in Queen Charlotte Sound. The workboat made a number of trips, traversing a turbulent gap outside which the *Alexander Mackenzie* was anchored. An enormous wave swamped the workboat, throwing into the water Acting Third Officer Patrick J. Veale, Seaman Pierre Therrien and Seaman Trim.

Swam 30 Feet

Seaman Haight, a member of the unloading party, ran along the shore, tied a line round his waist, and swam 30 feet or so in choppy water to reach Seaman Trim.

A lifeboat from the *Alexander Mackenzie* picked up Seaman Therrien and the body of Mr. Veale, who had drowned.

Notice of Seaman Haight's award was published in the Canada Gazette. He has received a certificate recording the honour and an insignia to be worn.

Un marin de la Garde côtière décoré pour bravoure

Un jeune marin de 22 ans, John James Haight, membre d'équipage du baliseur *Alexander Mackenzie*, de la Garde côtière canadienne, est le récipiendaire d'une décoration spéciale de la Reine pour bravoure. Haight, âgé de 22 ans, est natif de Prince-Rupert, C.-B.

Dans l'après-midi du 15 janvier 1966, le n.g.c.c. *Alexander Mackenzie* était ancré à l'entrée du détroit de Queen Charlotte à proximité d'Egg Island, sur la côte du Pacifique. L'équipage était affairé à décharger du ciment et des matériaux de construction qu'on transportait du navire à l'île à l'aide d'une péniche de 27 pieds de longueur spécialement conçue pour ce genre de travail.

Trois équipes prenaient part à ces travaux. L'une d'elles se trouvait à bord du navire; une autre, dans l'île, voyait à l'entreposage des matériaux; et la troisième se trouvait à bord de la péniche. Cette dernière était composée du troisième officier Patrick J. Veale et des marins Pierre Therrien et Michael Trim. Quant au marin Haight, il faisait partie de l'équipe travaillant dans l'île.

Il était environ 4 heures de l'après-midi. La péniche avait quitté l'île et se dirigeait lentement vers le navire où elle allait prendre son quinzième et dernier chargement de la journée.

Soudain, selon les témoins, une immense vague déferla sur la péniche qui, à ce moment-là, se trouvait à une cinquantaine de pieds du rivage. Le marin Trim fut le premier projeté à l'eau. L'embarcation était encore à flot, et ses deux autres occupants, Veale et Therrien, avaient tendu un câble à Trim. On s'apprêtait à le ramener

Henri (Hank) Gourdeau to represent Canada on I.C.A.O. Council.

Henri Gourdeau, executive assistant to the assistant deputy minister air, has been appointed to represent Canada on the council of the International Civil Aviation Organization.

His headquarters will be in Montreal, where the agency of the United Nations, founded in 1944, maintains a staff of 490 to serve 111 participating nations.

The principal aim of I.C.A.O. is to promote the development of aviation throughout the world. To that end it develops uniform technical standards of operation and procedure, encourages co-operative



HENRI GOURDEAU

à bord quand une seconde vague s'abattit sur la péniche qui coula à pic.

Haight, du rivage, fut témoin de l'accident. N'écoulant que son courage, il ne prit que le temps d'enlever ses bottines et d'attacher une corde à sa ceinture. Il se précipita à l'eau, tout habillé, pour se porter au secours de ses compagnons. Il réussit à rattraper Trim à quelque trente pieds du rivage, et les deux furent ramenés à terre à l'aide de la corde retenue sur la rive par les autres membres de l'équipage.

Bien que les trois naufragés portaient des brassières de sauvetage au moment de l'accident, le troisième officier Veale fut repêché noyé. Le marin Therrien, de son côté, fut retiré de l'eau, sain et sauf, par l'équipage du navire.

La décoration de la Reine consiste en une médaille accompagnée d'un certificat attestant la bravoure du récipiendaire.

action between the world's airlines, gives technical assistance to countries which require it, and encourages members to keep to a minimum inspection services and other procedures which tend to retard the rapid movement of goods and passengers.

D.O.T. specialists frequently assist I.C.A.O. by serving on various committees devoted to technical problems.

Mr. Gourdeau, who is married and the father of seven children, has been with D.O.T. since 1945. He was regional controller, civil aviation in Montreal prior to his appointment as executive assistant in 1964.

Born in Quebec, he obtained a Bachelor of Letters degree from the Quebec Seminary. He joined the RCAF in 1940 and was awarded the Distinguished Flying Cross for his exploits with the R.A.F. bomber command.

M. Henri Gourdeau nommé à l'OACI

M. Henri Gourdeau, ci-devant adjoint exécutif au sous-ministre adjoint pour l'Air, vient d'assumer ses nouvelles fonctions à titre de représentant du Canada au Conseil de l'Organisation de l'aviation civile internationale.

M. Gourdeau a établi domicile à Montréal où se trouve le siège social de l'OACI, organisme des Nations unies fondé en 1944. Quelque 490 employés constituent le personnel du Conseil de l'OACI auquel 111 pays sont affiliés.

Le but premier de l'OACI est d'encourager le développement de l'aviation au bénéfice du monde entier. A cette fin, elle établit des normes techniques uniformes applicables aux services de l'air, encourage la collaboration entre les divers services de transport aérien du monde, donne de l'assistance technique aux pays qui en ont besoin et cherche enfin par tous les moyens possibles d'améliorer constamment l'ensemble des services aériens sur le plan international.

Les spécialistes du ministère fédéral des Transports sont fréquemment appelés à seconder l'OACI dans son travail en siégeant sur des comités s'adonnant particulièrement à l'étude de problèmes d'ordre technique.

M. Gourdeau, marié et père de sept enfants, est au service du ministère des Transports depuis 1945. Il était régisseur régional de l'aviation civile à Montréal avant de devenir adjoint exécutif en 1964. Né à Québec, il détient un baccalauréat ès lettres du Séminaire de Québec.

Comme pilote au cours de la Deuxième guerre mondiale, il a mérité la Distinguished Flying Cross alors qu'il était attaché au Service de bombardement de la RAF.



CCGS Porte Dauphine, a marine and meteorology research vessel, operates on the Great Lakes and is based at the Parry Sound District Marine Agency of the Department of Transport. Formerly a Royal Canadian Navy ship, "Porte Dauphine" was acquired from the navy by the Department of Transport in 1960.

CCGS "PORTE DAUPHINE"

LENGTH: 125 feet, six inches
BREADTH: 26 feet, six inches
DRAFT: 13 feet
POWER: Diesel, 600 B.H.P.
GROSS TONNAGE: 429

Le *N.G.C.C. Porte Dauphine* est un navire de recherche maritime et météorologique utilisé sur les Grands Lacs. Son port d'attache se situe à l'agence de la marine de Parry Sound. Autrefois au service de la Marine canadienne, le *Porte Dauphine* a été acquis par le ministère des Transports en 1960.

LE N.G.C.C. PORTE DAUPHINE

LONGUEUR: 125 pieds, six pouces
LARGEUR: 26 pieds, six pouces
TIRANT D'EAU: 13 pieds
PUISSANCE: Diesel, 600 cvf
JAUGE BRUTE: 429 tonneaux

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THE MATERIAL

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JANUARY—FEBRUARY 1967

JANVIER—FÉVRIER 1967



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JANUARY-FEBRUARY

JANVIER-FÉVRIER 1967 • OTTAWA

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COVER

The CCGS "Louis S. St-Laurent," the most powerful conventionally-powered icebreaker in the world, is launched from the shipyard of Canadian Vickers Limited, Montreal. (Story on page 7).

COUVERTURE

Le N.G.C.C. «Louis S. St-Laurent», le plus puissant navire à propulsion classique au monde, est mis à flot aux chantiers de la Canadian Vickers Limited, à Montréal, au cours d'une imposante cérémonie. (Voir article en page 5).

Editor

Bryan Goodyer

Rédacteur français Edouard Deslauriers

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ROGER DUHAMEL F.R.S.C., QUEEN'S PRINTER AND
CONTROLLER OF STATIONERY, OTTAWA, 1967

ROGER DUHAMEL M.S.R.C., IMPRIMEUR DE LA REINE
ET CONTRÔLEUR DE LA PAPETERIE, OTTAWA, 1967





FROM THE DEPUTY MINISTER

Scores of things to do, to see and to remember will take place in 1967. They will result from effort at every level of public life—the federal and provincial, the municipal and the community. Our belief in Canada's future as well as its record supports every event.

The Department of Transport will play its part in several projects: in particular, historical works which will commemorate the growth of transportation in relation to our two largest operating services, marine and air.

To give our Centennial Year an even more direct meaning, I suggest to you the merit of individual or family projects which may be small in themselves—the planting of a tree, a historical pilgrimage, the erecting of a flagpole—but which leave even more personal and, therefore, more indelible memories. The Baldwin family is presently engaged in active discussion of what we will do. It must be something that will mark our nationhood and our future growth.

J. R. Baldwin



LE MOT DU SOUS-MINISTRE

Il y aura en 1967 une foule de choses à faire, à voir et à se rappeler. Elles seront le fruit de l'activité exercée à tous les échelons de la vie publique, fédéral, provincial, municipal et local. Chaque événement qui se produira découlera de notre foi en l'avenir du Canada d'après ses réalisations passées.

Le ministère des Transports contribuera à la réalisation de plusieurs projets, notamment à l'édification d'ouvrages historiques qui rappelleront l'évolution des transports au sein de nos deux plus importants services d'exploitation, les Services de la marine et les Services de l'Air.

Afin que l'année du Centenaire vous touche plus directement, je vous propose la satisfaction qu'apporte la réalisation d'initiatives particulières ou familiales peut-être modestes, comme la plantation d'un arbre, un pèlerinage historique, l'érection d'un mât de drapeau, mais combien riches en souvenirs plus personnels et, partant, plus vivaces. La famille Baldwin est en train d'étudier sérieusement les divers projets qu'elle pourrait accomplir. Ces projets devront constituer des jalons dans l'évolution de notre pays.

J. R. Baldwin

Le «Louis S. St-Laurent» mis à flot sous d'heureux auspices

Le nouveau brise-glace de la Garde côtière canadienne, le n.g.c.c. «Louis S. St-Laurent», a été mis à flot, le 3 décembre dernier, au cours d'une imposante cérémonie aux chantiers navals de Canadian Vickers, à Montréal. Le navire, le plus puissant de son genre au monde, ne pouvait être lancé sous de meilleurs augures. Il porte le nom d'un ancien premier ministre; sa marraine est l'épouse du premier ministre actuel, et il a reçu à son départ la bénédiction de Son Éminence le cardinal Paul-Émile Léger.

Une foule de personnalités, dont le très hon. Louis St-Laurent, le premier ministre Lester B. Person, le ministre des Transports, l'hon. J. W. Pickersgill, d'autres membres du Cabinet fédéral, des représentants de la Garde côtière des États-Unis, les dirigeants de Canadian Vickers et autres étaient sur les lieux au moment du lancement.

Immédiatement après la bénédiction du navire par le cardinal Léger, Madame Pearson a fracassé la traditionnelle bouteille de champagne sur la proue aux acclamations de la foule rassemblée pour saluer le lancement du plus puissant brise-glace non nucléaire au monde.

Prenant la parole au cours de la cérémonie, le ministre des Transports a rendu hommage à tous ceux qui ont travaillé à la construction du navire. Soulignant la présence des dignitaires au lancement, M. Pickersgill s'est dit convaincu qu'on ne pouvait inaugurer un navire sous de plus heureux auspices. Il s'est dit

particulièrement heureux du fait que les noms de trois de nos plus distingués Canadiens—Louis S. St-Laurent, Lester B. Pearson et le cardinal Paul-Émile Léger—soient associés à cet événement historique.

A la réception qui a suivi le lancement, le premier ministre Pearson s'est joint aux dirigeants de Canadian Vickers pour faire l'éloge de l'ancien premier ministre Louis St-Laurent. «Il est juste, a-t-il dit, que le nom de M. St-Laurent soit honoré de cette façon.» (Agé de 84 ans, M. St-Laurent, en proie à la plus vive émotion, a assisté au lancement, mais, répondant aux désirs des membres de sa famille, il s'est abstenu de prendre part à la réception.)

Le premier ministre Pearson a également vanté les mérites de la Garde côtière canadienne, dont la création remonte au temps de la Confédération. Il a rappelé que la flotte de la Garde côtière compte maintenant quelque 200 navires de tous genres. L'acquisition du «Louis S. St-Laurent» porte à onze le nombre de brise-glace, et huit navires plus légers font à la fois fonction de brise-glace et de baliseurs.

Troisième lancement de l'année

Le «Louis S. St-Laurent» est le troisième navire de la Garde côtière mis à flot, cette année. Le navire météorologique-océanographique «Quadra» a été lancé aux chantiers de la



L'ancien premier ministre Louis St-Laurent a eu peine à contenir l'émotion qu'il ressentait au lancement du nouveau brise-glace canadien qui porte son nom. Il est photographié, à droite, en compagnie de la marraine du navire, Madame Lester B. Pearson, et du président de Canadian Vickers, M. R. C. Pearse.

Former Prime Minister Louis St-Laurent proudly looks on as the new Canadian ice-breaker bearing his name is about to be launched. Mr. St-Laurent, at right, appears here with Mrs. Lester B. Pearson, sponsor of the ship, and the president of Canadian Vickers, Mr. R. C. Pearse.

Burrard Dry Dock Company Limited, à Vancouver, le 4 juillet dernier. On prévoit que sa construction sera complétée au printemps de 1967. Il sera attaché à la station océanique «PAPA», au milieu du Pacifique. Le «Nicolet», navire de sondage utilisé dans les travaux qu'on effectue dans le chenal maritime du Saint-Laurent, a été lancé au mois d'août aux chantiers de Collingwood Shipyards. Il est entré en service au mois de décembre.

Le ministère des Transports a actuellement neuf navires en construction. Certains sont destinés à la Garde côtière et les autres à des services et agences du gouvernement. De plus, 24 autres bateaux plus légers sont en construction, dont 22 sont pour la Garde côtière et deux pour le service de pilotage du ministère des Transports.

On mettra bientôt en chantier un nouveau cotre de recherches et de sauvetage, le premier de six qui seront éventuellement construits pour la Garde côtière. On a également lancé des appels d'offres en vue de la construction d'un baliseur-brise-glace pour les Grands Lacs. D'une longueur de 234 pieds, ce navire sera un des plus gros du genre utilisé par la Garde côtière dans les Grands Lacs.

Le coût total des navires actuellement en construction s'élève à plus de \$90,000,000. C'est certes un programme fort chargé dans le domaine de la construction navale au pays.

Patrouille de l'Arctique

Le «Louis S. St-Laurent» joindra la flotte de la Garde côtière au printemps de 1968. Il sera utilisé pour la patrouille de l'Arctique et dans les eaux de l'est canadien.

D'une longueur de 336 pieds et six pouces et d'une puissance de 24,000 chevaux-vapeur, le navire sera propulsé par un groupe turboélectrique.

Conçu pour faire face aux plus rigoureuses conditions de l'Arctique, le brise-glace a un tirant d'eau maximum de 31 pieds. Sa vitesse de croisière sera de 13 nœuds. Son équipage se composera de 122 officiers et marins.

Il sera muni d'un pont d'envol pour deux hélicoptères qui seront logés dans un hangar situé sous les ponts. Un ascenseur servira à monter les appareils jusqu'au pont d'envol.

Le navire sera également doté d'un hôpital pouvant accueillir une quinzaine de patients. Il sera pourvu des installations nécessaires aux travaux d'océanographie, d'hydrographie et d'autres travaux scientifiques connexes qui seront entrepris à bord.

Le brise-glace pourra de plus servir de navire-école pour les cadets du Collège de la Garde côtière. A cette fin, on aménagera à bord une salle de cours, une salle d'étude et un salon. Les cadets y trouveront les moyens de parfaire leur formation en mer à bord d'un navire pourvu de l'outillage le plus moderne qui soit. La Direction des télécommunications du ministère des Transports fera installer à bord les plus nouvelles aides électroniques à la navigation et le matériel de communications le mieux adapté aux exigences de notre époque. La timonerie renfermera des pupitres de commande et de navigation d'un nouveau genre conçus par le Conseil de recherches pour la défense et mis au point par la Garde côtière.

L'appareil à gouverner, de son côté, sera du type hydro-électrique et comprendra un servomoteur de secours. Un système de commande entièrement électrique permettra la conduite depuis la timonerie, le toit de la timonerie et le nid-de-pie.

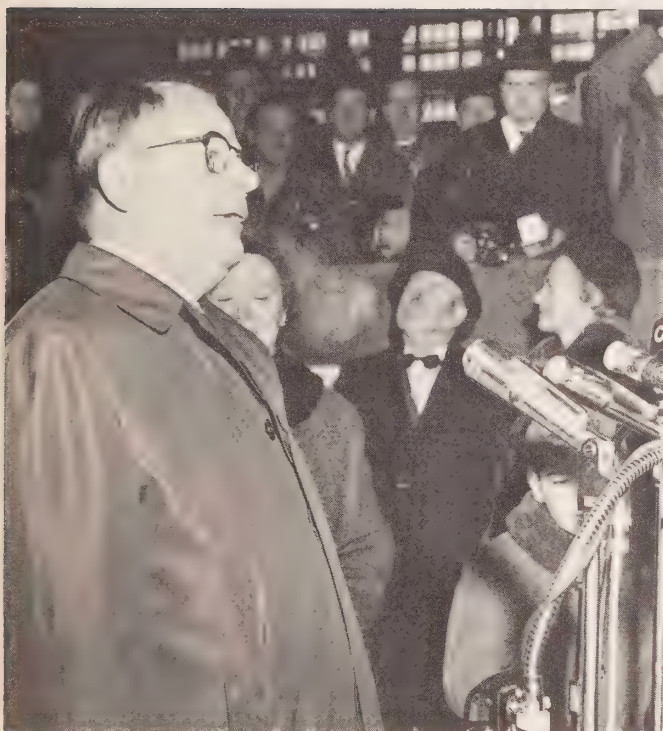
Le «Louis S. St-Laurent» est appelé à jouer un rôle de première importance comme principale aide à la navigation dans le golfe Saint-Laurent et dans les eaux de l'Arctique canadien. Il n'y a pas de doute qu'il saura se révéler à la hauteur de la tâche et faire honneur au nom qu'il porte de même qu'au pays tout entier.



Son Eminence le cardinal Paul-Émile Léger bénit le "Louis S. St-Laurent", nouveau brise-glace de la Garde côtière canadienne, lors de son lancement à Montréal en décembre.

His Eminence Paul-Émile Cardinal Léger blesses the new Canadian Coast Guard ice-breaker "Louis S. St-Laurent" shortly before its official launching in Montreal in December.

Strongest Conventional Icebreaker Launched for Coast Guard



The Minister of Transport, Hon. J. W. Pickersgill, speaks to the gathering at the launching of CCGS "Louis S. St-Laurent" at the Canadian Vickers shipyards in Montreal.

Le ministre des Transports, l'hon. J. W. Pickersgill, s'adresse à la foule au moment du lancement du n.g.c.c. "Louis S. St-Laurent" aux chantiers de Canadian Vickers, à Montréal.

The CCGS "Louis S. St-Laurent", the most powerful icebreaker of its kind in the world, was launched Dec. 3 in an impressive ceremony held in the Montreal yard of Canadian Vickers Limited.

The ship, which bears the name of former Prime Minister Louis S. St-Laurent, was sponsored by Mrs. Lester B. Pearson, wife of the present prime minister, and received the blessing of His Eminence Paul-Emile Cardinal Leger.

A large group of dignitaries was present at the launching, including Mr. St-Laurent, Mr. Pearson, Transport Minister J. W. Pickersgill, and other members of the federal cabinet, representatives of the United States Coast Guard, directors of Canadian Vickers and others.

Immediately after the vessel was blessed by Cardinal Leger, Mrs. Pearson broke the traditional bottle of champagne over the ship's bow to the cheers of a large crowd which gathered to watch the launching of the world's most powerful non-nuclear icebreaker.

Speaking at the launching ceremony, Mr. Pickersgill paid tribute to all those who had worked on the ship's construction.

Referring to the fact that the names of three distinguished Canadians—Mr. St-Laurent, Mr. Pearson and Cardinal Leger—were associated with the launching, he expressed the feeling that this might have a significant bearing on the future in store for the newest addition to the Coast Guard fleet.

Mr. Pickersgill said he felt the ship could not have been launched under more favourable auspices.

At the reception that followed the launching, Mr. Pearson joined with the directors of Canadian Vickers in praising the former prime minister.

"It is fitting," he said, "that the name of Mr. St-Laurent should be honored in this way."

(The 84-year-old Mr. St-Laurent, who was overcome with emotion at the launching, did not attend the reception in accordance with the wishes of his family.)

Mr. Pearson also had high praise for the Canadian Coast Guard, the government-operated antecedents of which were established at the time of Confederation.

He recalled that the Coast Guard fleet now numbers about 200 ships of all types. The acquisition of the "Louis S. St-Laurent" brings to 11 the number of icebreakers in the fleet. Eight lighter vessels serve both as icebreakers and as supply and buoy vessels.

Arctic Patrol

The "Louis S. St-Laurent" will join the D.O.T. fleet in the spring of 1968 when it will be assigned to Arctic patrol and service in Eastern Canadian waters.

The ship, which is 336 feet, six inches in length and has a shaft horsepower of 24,000, will be powered by a steam turbo-electric propulsion system.

Designed to cope with the severest Arctic conditions, it has a maximum draft of 31 feet, will have a cruising speed of 13 knots and will carry a crew of 122 officers and men.

The ship will have a flight deck for helicopter operations and room to house two of the "choppers" in a hangar below decks with an elevator to raise them to the flight deck.

The icebreaker will have hospital facilities for approximately 15 patients and provision will be made for the working requirements of oceanographic, hydrographic and related scientific undertakings that will be carried out aboard ship.

The "Louis S. St-Laurent" will also be able to serve as a training vessel for cadets from the Coast Guard College. For that purpose, accommodation will be provided for a classroom, a study and a lounge. There, cadets will be able to complete their training at sea on a ship provided with the latest equipment anywhere.

The Telecommunications Branch will be responsible for the installation of the most modern electronic aids to navigation and communications equipment best suited to present day requirements.

The ship's wheelhouse will contain the latest operational and navigational consoles based on an initial concept submitted by the Defence Research Board and developed by the Canadian Coast Guard.

Its steering gear will be electric-hydraulic, with emergency power steering. An all-electric control system will permit the ship to be steered from the crow's nest and wheelhouse top, in addition to the wheelhouse itself.

Third Launching

The "Louis S. St-Laurent" is the third Coast Guard ship to be launched this year.

The oceanographic-weather ship "Quadra" was launched at the Burrard Dry Dock Company Limited yards in Vancouver last July 4. It is scheduled for completion in the spring of 1967 when it will be assigned to weather station Papa in the mid-Pacific Ocean.

The "Nicolet," a sounding vessel used in the work carried out in the St. Lawrence Ship Channel, was launched in August at the Collingwood Shipyards and entered service in December.

The Department of Transport now has nine vessels under construction for the Coast Guard and other government services and agencies. Another 24 lighter vessels are under construction, 22 for the Coast Guard and two for the Pilotage Service.

Construction is expected to start soon on a new search and rescue cutter, the first of six to be built for the Coast Guard.

Tenders have also been called for the construction of a light icebreaker, supply and buoy vessel for the Great Lakes which, at 234 feet in length, would be one of the largest of its kind used by the Coast Guard on the Lakes.

Total cost of all vessels now under construction amounts to more than \$90,000,000.



Artist's conception of CCGS "Louis S. St-Laurent".

Esquisse du n.g.c.c. "Louis S. St-Laurent".

The Next Hundred Years in Canadian Transportation

The following article has been prepared expressly for the use of the Maclean-Hunter Publishing Company as part of its Centennial report, and may not be reprinted without special permission.

Let us assume first what seems probable: that the population of Canada will grow from its present 20 million to 35 million in the next 25 years, and to 100 million by 2067. The trend to concentration in urban areas can be expected to accelerate. Within a generation there may be an almost continuous urban area from Windsor to Quebec City, and other agglomerations will appear elsewhere in Canada; in subsequent years the population density in these areas will continue to increase. The work week will continue to be reduced, leaving the bigger population with more leisure time and more inclination to travel for recreation and pleasure.

Will it always remain a pleasure to travel? Will people be able to move freely in the midst of such widespread congestion? What kind of transportation system will move them and the goods of commerce? Today about 85% of intercity passenger-miles is provided by the private auto, with the remainder divided more or less equally between bus, rail, and air. Railways account for about 42% of the ton-miles of goods carried between cities, water carriers 27%, trucks 9%, oil and gas pipelines 22%, and air carriers less than 1%. How will these patterns change in the future?

Local Transportation

Perhaps the most urgent future problems are in local transportation in our growing cities. Already we can see the threat of road and street saturation looming to a point where we are immobilized in one giant traffic jam. Already there is a growing concern with air pollution, to which the motor vehicle contributes a considerable share. Within ten or fifteen years bigger cities may find it advisable to limit the use of private autos in business centres and other areas of congestion. Improved methods of pollution control will be imposed, and the electric cars now being developed could become popular. Within twenty-five to fifty years autos and trucks could be largely prohibited in all except residential areas.

Mass transit media will expand rapidly in a variety of forms during the next hundred years. Moving sidewalks will be popular for short distances, perhaps with seats, but most of the service will be underground. Vehicles and systems will be fully automatic. Downtown buses will disappear, and surface and subway trains as we know them may give way to other tube-borne vehicles, which will be propelled by air pressure, linear electric motors or rockets. There will be sophisticated adaptations of the continuous flow vehicle, of which the moving sidewalk is a

simple example, allowing individuals or small groups to be taken aboard and let off at will without stopping the main movement.

The local distribution of goods a hundred years from now will be by conveyor belts, pneumatic tubes, and other underground systems. Processing and commercial establishments will receive goods by this means. Retail deliveries will be made to central points in residential areas, where the customer can pick them up or have them delivered to his door by a mechanized delivery service.

Intercity Passenger Travel

Intercity passenger traffic will continue to grow rapidly, particularly for the next twenty-five years. The private car will remain the main vehicle during that period, even for long distance travel, but it will yield a good deal of ground to other surface vehicles and aeroplanes. Thereafter it could lose first place to the small private aircraft able to land in a small area, and during the rest of the century these planes could fill much of the role that the private auto fills today.

The auto of the future will move on an expanded system of thoroughways. It will in many cases be controlled by a form of automatic guidance system, so that the driver need control it fully only on less heavily travelled roads and in residential areas. Speeds and density of traffic will be greater; hence safety engineering will receive major emphasis. Trucks and buses will travel on separate highways or in separate lanes.

Air transport will be the leader in passenger traffic growth; airlines are now ordering and buying millions of dollars worth of new jet aircraft to meet the coming demand. The main growth will be in hauls of something more than 500 miles. There will be two new developments in this field within ten years. One is the subsonic jet, able to carry 500 to 900 passengers; it is hoped that this aircraft will substantially reduce fares on high density routes. Another is the supersonic transport. It will cut air times in half, but it will be more costly at least initially and hence its appeal may be limited to those willing to pay a premium price. Moreover, the problem of the sonic boom has not yet been fully overcome, so there will be a need for a much more complex air traffic control for the supersonic craft.

The big breakthrough of the century in the air could be the hypersonic plane, travelling at more than three or four times the speed of sound and beyond the "heat barrier", rocket propelled. Another spectacular development may be the modifica-

tion of present space vehicles for long-distance and medium-distance passenger service. Needless to say there will have to be tremendous accompanying improvements in ground transportation, ticketing, and baggage handling.

The development of short-haul aircraft for use between major cities is taking place already. Air-bus jet aircraft, capable of carrying over 250 passengers should be in production in the next few years. STOL and VTOL aircraft are now in the advanced experimental stage and should be in commercial usage before many years have elapsed. These aircraft are capable of using limited size landing areas close to or in the center of major cities. As their flexibility increases and their operating costs decrease these air vehicles could be used for shuttle services between suburban centres of large cities. Smaller versions can be developed for personal transportation, and these could be a typical family vehicle of Canada's second century.

Runways have reached their maximum length now; navigational aids will allow fully automatic landings on all scheduled airlines within ten years and weather delays will be a thing of the past. Within twenty-five years air navigation will be automatic from take-off to landing; computers will program the entire journey including flight planning, weather, and passenger loading. Automatic devices will keep track of air vehicles and control them to prevent deviation or collision.

The railway share of passenger traffic has declined sharply in the past 15 years, but it can be expected to increase in the coming years. Long haul traffic has suffered most and may decline further. The increase will be in trips up to 500 miles, including commuter service as well as inter-urban movement, and will occur principally in high density areas. The C.N.'s new service between Toronto and Montreal and its planned turbo-train are promising first moves. They will be followed by more advanced versions operating at increasingly higher speeds. A possible design will be air-cushion vehicles moving on a suitable track-way at speeds up to 400 miles an hour, propelled by linear electric motors. Another will be "tube coaches" borne in a tube of air at speeds between 200 and 2000 miles per hour, possibly rocket-propelled. These have been dubbed "fluid-supported" vehicles. Other possibilities include the use of overhead monorail systems, which might offer another application of the linear electric motor. Such services will carry a large part of the short-haul traffic in competition with air travel.

Inter-city bus traffic has shown little or no growth trend for more than 15 years and may remain at present levels for some years. Buses and trucks should in due course have exclusive use of their own highways and traffic lanes. They will be able to operate without drivers, controlled by a computer programmed guidance system.

Other vehicles such as hovercraft, hydrofoil vessels, helicopters, and auto-gyros will be perfected for specialized uses.

Bulk Freight

Railways, waterways, and pipelines will remain the main carriers of heavy bulk cargoes over long distances for at least another generation. All will continue to experience traffic growth for that period, though the rates of growth may vary and their relative position may change. By the year 2067, however, pipelines or tubes of some sort could take over much regular bulk movement, solids as well as liquids.

In water transportation the modern trend to large bulk carriers has been reflected in the Great Lakes trades. Carriers of dry bulk cargo are now typically of 25,000 ton capacity or more, limited only by the size of the canal locks. A new U.S. lock at Sault Ste. Marie soon to be opened will pass vessels of over 40,000 tons, and even this is not necessarily the final limit. Larger locks will be required in the Welland and St. Lawrence canals. The main technological advance in sight is marine nuclear propulsion; as yet it is not economic, but in time it may be developed to offer substantial cost savings. Other possibilities such as submarine transport promise little

for domestic application but could become important for our foreign trade.

A major advance in the rail handling of bulk cargo is the integral train. It is made up of a pre-determined number of cars designed for one commodity and used for that purpose only. The train remains coupled as a unit. It is operated as part of the processing industry rather than as part of a railway service, and this makes possible substantial economies. It will probably take at least a generation to explore its full possibilities.

Pipelines now carry oil and gas almost exclusively. Some success has been achieved already in the movement of solids, and within ten years it will be possible to handle anything that can be put in suspension and moved as sludge. Eventually a way will be found to handle grain and other commodities by pipeline. When that day comes the pipeline may take over most of the basic load from both the rail and the water carriers.

Manufactures and Miscellaneous Freight

The larger population and greater affluence will increase the importance of regional markets, and this together with the greater use of lightweight plastics and other synthetics will reduce the relative burden of transportation costs. Most manufactured goods will be transported in containers. The containers will be of standard sizes interchangeable between road, rail, water, and air carriers. Research is going forward on the pipeline movement of solids in capsules or bubbles and success is only a question of time. It is reasonable to expect that by the year 2067 pipelines will be able to handle standard containers as well as other capsules, making them a major element in the transportation of goods of all kinds.

Highway freight transport has increased more than twelve fold in the past thirty years. This growth rate is unlikely to be maintained, but the rate will probably be greater than the rate of population growth for at least another generation. Truck "trains" will be developed, turbine powered, and can grow to a length of 500 feet or more; in this even they should be moved automatically on exclusive highways or highway lanes. Motor vehicles will be used mostly in moves of under 500 miles and mostly for containerized and other miscellaneous freight, though some may be used in special circumstances to carry as much as a railway car.

Air cargo has made a rather slow start but is expanding rapidly. So far it has carried mostly articles of a high value per pound or emergency production components. Business firms are now finding that air cargo can be used to reduce total distribution costs in a widening range of commodities, and jumbo jets on the drawing boards could carry as much cargo in a week as a good-sized liner could deliver in the same time. The air carriers expect that their cargo revenue will be greater than their passenger revenue by 1980; by the year 2067 domestic air cargo will probably take second place behind pipeline movement.

The Role of Government

Both industry and government must share the responsibility for achieving an efficient and balanced transportation system. Vision, planning and initiative will be required on both sides.

One of the greatest immediate needs is for more research on how one mode of transport links to another, research directed from an overall view seeking a sound basis for integration or co-ordination. We need to know more about the demand needs and relationships between fields of transport. Another important factor is to plan and formulate policy which takes full account of the total implications for the whole of the transportation system, instead of treating railways, ships, aircraft, pipelines, in separate compartments. The role of government agencies will be to work with industry in this spirit to make sure that the transportation system develops in the way that will best serve the public need and the public good.

Planning Airports for the Future

by W. A. Ramsay

W. A. Ramsay, B. Arch., M.R.A.I.C., has been in the fore of airport planning and development since 1952, when he became D.O.T.'s chief architect and thus assumed an important role in the Department's \$100,000,000 major air terminal building program in the following decade. Last summer, he was appointed senior architectural adviser to D.O.T. This article, which will be in two instalments, is based on a recent talk by Mr. Ramsay to the Ottawa Branch of the Engineering Institute of Canada.



Toronto International Airport

Air terminal buildings in Canada are recognized by international airport planners as the best in the world. Formerly, airport planners used to visit air terminals in Britain and the United States for planning guidance—but today these terminals are visited to observe the difficulties which have shown up with the increase in traffic over recent years.

Since the opening of the Montreal terminal in December 1960, Winnipeg November 1963, Edmonton in December 1963 and Toronto in January 1964, airport planners, architects and engineers have come from every part of the world to observe, admire and indeed to follow many of the planning concepts in these Canadian terminals.

The winning design as well as the second prize winners in a recent competition for a new terminal concept at Berlin, Tegel Airport, are patterned after the Toronto concept.

The airport authority for a new airport to serve Paris has made several on-site studies of both Toronto and Montreal terminals and is developing a unit expansion type concept, first introduced in the Toronto plan.

The design success of Canadian air terminal buildings is due primarily to the co-operative spirit and team effort of a wide range of professional specialists, economists, mathematicians, public relations officers, lawyers, interior designers, landscape architects, artists, sculptors, engineers and architects—to mention only the principal contributors.

Influence on Design

In many countries it is the responsibility of the community to establish and finance its own airport, with grants-in-aid from the government for special facilities, provided that zoning, safety and other minimum regulations are followed.

This is not the case in Canada. All major airports and all save one or two minor ones have been designed and constructed under the supervision and at the expense of D.O.T., which also operates them.

In 1952 the Government of Canada commenced a program of new facilities for the safe navigation and control of Canadian air lanes. This was followed by a construction program to lengthen and strengthen the runways to accommodate new aircraft with heavier wheel loadings and faster take-offs and landings.

In phase with these two undertakings, there was a program for the construction of new terminal buildings. The terminal building program has now exceeded \$200,000,000 (apart from runways, land, ground services, radar, radio, communications or other facilities.)

It was important at the commencement of this building construction program to establish policies and procedures to govern the size and facilities to be accommodated.

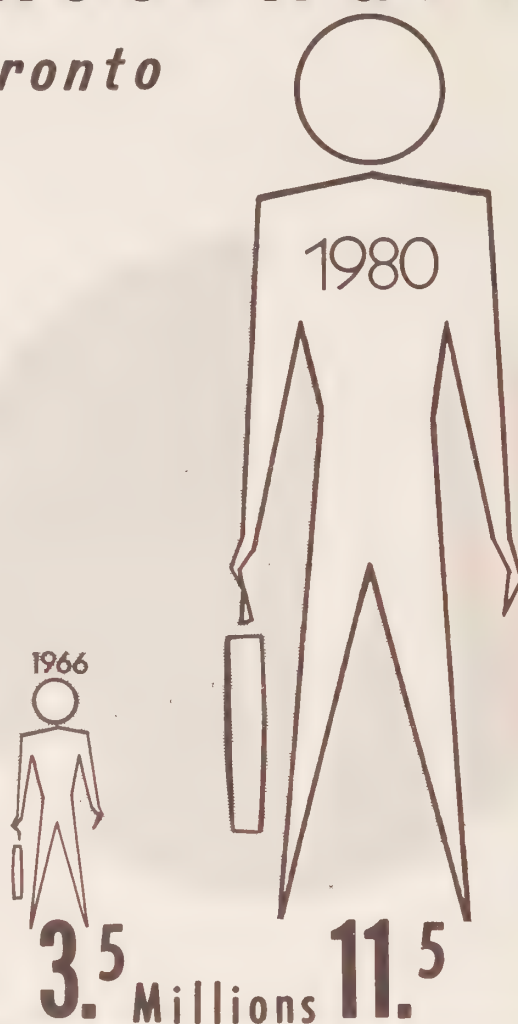
It was decided to construct terminal buildings to allow for a 10-year growth after completion of construction, and to pre-plan for further expansion and possible changes in airlines operations. Allowing time for studies, preparation of plans and specifications, tenders, contract award, construction and installation of airline equipment, it may be seen that for major terminals, all projections must be made almost 15 years in advance. With the rapid advances in civil aviation over the past years, it may be appreciated that this represents a challenge to the most imaginative team of architects and engineers.

Having established the growth period, D.O.T.'s economics branch made a forecast of the typical peak passenger traffic per hour in the terminal in the last year of the growth period. The forecast figure was developed by three different methods and then averaged for the final figure.

The first method involved an analysis of current traffic, related to the actual number of persons in the building, projected

PASSENGERS

Toronto



to the year concerned, onto a curve of the annular growth in air traffic in Canada.

The second method compares current traffic at the airport with the population which the airport serves, and then projects this proportion to the increase in population for the year concerned.

Both first and second methods are adjusted for anticipated changes in airline routes to or from the airport as well as changes in rights of the operating airlines.

The third method summarizes the traffic predictions of the operating airlines and then with adjustments, the final figure derived is averaged with the figures of the first two methods.

Based on the established typical peak passenger hour (T.P.H.) at the end of the 10 year growth period, space and facilities standards are applied to provide the total air terminal requirement. At least that was the theory, and every effort was made to adhere to it.

In some cases, it was necessary to depart from this space requirement theory—for example at Toronto. On the basis that construction would be completed in 1961, the 10 year forecast was 1,720 T.P.H. for 1971, or 4,195,000 passengers annually.



A shadow of future passenger-handling and other problems for airports is cast by this full-scale mock-up of the 100-yards-long Boeing SST, recently chosen for production by the United States government. The wings are designed to fold back when flying at supersonic speeds. The craft, which is expected to be in service early in the 1970's, will fly from New York to London—3,546 miles—in two hours, 41 minutes, carrying as many as 350 passengers.

For this traffic load and for future projections our consultants, John B. Parkin Associates, developed a concept of four unit terminals, two of which were to provide for the passenger load to 1971. For budgetary reasons, only one unit was constructed. Due to unsettled labor conditions throughout the construction period, it was not completed until January 1964. T.P.H. estimates during the past summer went as high as 4,000 and current annual estimate of passengers is approximately 3,000,000.

It has proved fortunate that the second unit at Toronto was not constructed in 1964, because we now are better prepared to plan for future demands. The same was true at Montreal where, because the fingers and aeroquay at Montreal were not committed until one year before the building opened, it was possible to design these facilities to accommodate current jet aircraft (DC8's) although at the time designs were started, the airlines stated that they had no confidence that the travelling public would accept flights at speeds of over 500 m.p.h.! Because the second unit was not constructed at Toronto by 1964, it is now possible to develop a concept to accommodate projected types of aircraft, the super-jet seating 350 to 500 (or more) passengers and supersonic transports. It is significant to note that many airlines until recently had the same attitude to the

super-jet and SST that they had 10 years ago to the 500 m.p.h. jet—"the travelling public will not accept them"; "economics are against them."

To return to the subject of Toronto, studies are in progress to determine the projected requirements based on a balanced systems planning approach to the airport as a whole. This requires many new and additional professional specialists using modern techniques of mathematical modeling, regression analysis, applying operational and cost variables for computer analysis. To be completely realistic this study must examine and make projections on the traffic potential of the communities served by Toronto Airport, the method and flow of this traffic from point of origin to and from the airport, the socio-economic influence on the pattern, as well as projections for traffic, on flights to points not yet determined.

Space and facilities standards are applied to the T.P.H. to produce the total space allowance for the public areas in a terminal deserve a few words of explanation. Predicated on overall averages a peak passenger is allowed 25 square feet in the terminal. There is no variable—whether the passenger moves from the ticket counter to the departure room or elsewhere in the building. Thus, if 100 passengers find themselves crowded

together, this indicates that elsewhere in the building they could find any number of vacant 25 square foot areas. From the economist's and taxpayer's standpoint this procedure is justifiable—but it challenges the best architectural designers to solve the problem of proper space distribution.

Standards are also applied to the allowable areas for mechanical and electrical distribution centres. The engineer often has to crowd the equipment in with a shoe-horn—giving certain problems to the maintenance engineer.

Standards apply to the number of toilet facilities—related to the T.P.H. Bear this in mind the next time you travel and remember that these facilities were located to meet the convergence of lines of traffic flow. Notwithstanding, standards are a necessary control and they are employed by the architectural designer on occasion to deny unrealistic space demands.

Space requirements of the primary tenants, the airlines, are only loosely prescribed. For example, space used exclusively by airlines must be jointly rented, or rented by one airline which, in turn, recovers proportionate costs from joint users. Airlines are required to rent space behind the back wall of their ticket counters, to correspond to the length of the ticket counter frontage.

Space requirements for inspection service facilities are predicted on the proportionate mix of foreign aircraft arrivals, related to the T.H.P. (In many other countries the airlines are charged for inspection services on a pro-rata basis). Space allowance for store concessions and restaurants are calculated on the basis of an economic return to amortize the cost.

Before final approval is given to the plan of any major terminal, an economic feasibility study is made to demonstrate that the estimated capital cost of the project will be amortized by rentals and other revenues. More correctly stated, this study indicates the future year in which amortization and operating costs break even with revenues.

In undertaking these economic feasibility studies, it is assumed that all space occupied by the D.O.T. and other government agencies are rent-paying tenants—although in the case of other government agencies the payment is a book entry and no funds actually changed hands. This does not apply to airline or other tenants, although in some cases concessionaires are assessed on the basis of a floor rental plus a percentage of gross revenue, often established on a tender basis. A few exceptional concessions are operated on a management fee basis, with the D.O.T. picking up either the profit or deficit, as the case may be, the latter as a service to the public.

The establishment of the rental rate structure is a topic too complex to be included in this paper, but one significant factor may be mentioned because it acts as a control on space requirements. The highest rental rate in a terminal is applied to airline ticket counter frontage to deter airlines from overstating their requirements in the premium cost area of the terminal.

Although the problem of establishing the overall space requirements of a terminal is difficult and complex for departmental planners, the problem for an airline to establish its space requirements is equally difficult, because they too are required to com-



In this illustration from a Boeing brochure, it is proposed that baggage handling be facilitated by means of numbered and, perhaps, color-coded baggage containers with a relatively small number of compartments. These would go on and off the aircraft intact and be delivered by conveyor belts into the terminal where passengers could find their luggage with ease.

mit for their space for a ten year period, at least in critical premium space areas.

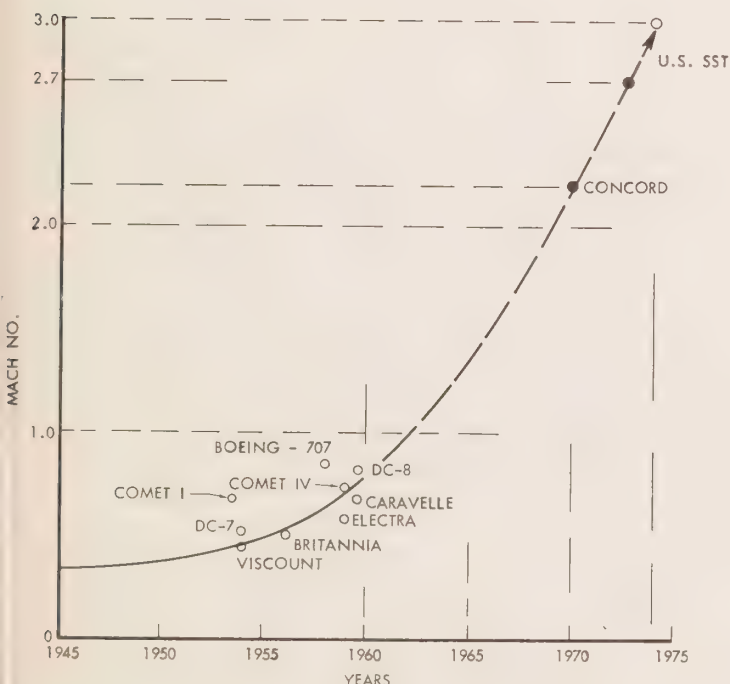
In addition to commitment for the rental rate, the airline is responsible for the provision of, or capital cost of special equipment, used exclusively by it or provided especially at its request, such as the outgoing baggage equipment, closed circuit television systems, pneumatic tube systems, special power outlets (plus power charges) special finishes or built in facilities of any kind. Apart from the consideration of the capital recovery, this practice and policy is necessary for the D.O.T. in order to avoid charges by one airline that another airline obtained more or better facilities at the same rental rate. The converse is also found, where an airline seeks to lower the applicable rental rate, by offering to accept a lower than the standard of finish, illumination level, heating, etc.

Incoming baggage equipment and other specialties, generally utilized by all airlines, are provided and installed by D.O.T. and included in the total capital cost when calculating the rental structure.

The costing of the public areas in terminal buildings follows another complex procedure, but generally speaking this is apportioned among all of the building tenants and incorporated into the rental structure.

Initially the rental structure was predicated on pre-final capital costs and estimated costs for operation and maintenance, but all tenants are informed of D.O.T.'s intention to revise the structure when and if necessary to recover actual costs.

In our next issue, Mr. Ramsay writes about the new era of supersonic and jumbo aircraft and the pressing problems they pose in the design and modification of our airports.



Speed growth history of commercial transport.—Prepared by Lockheed-California Company

Interfering with Interference

by William Dunstan

Information Services Division

When Ralph Bunt joined the civil service as a ship's radio operator back in 1925, he was nicknamed "Sparks" along with the rest of his fraternity.

The name originated with the first type of wireless transmitter, which broadcasted dots and dashes by shooting electricity across a gap between two terminals in the form of an arc, or spark. These bursts of energy went into the air from the ship's aerial to be picked up by receiving sets.

But times have changed. The sparks that were then the life force of radio communications still are with us, but they no longer are wanted. For they remain as the static created by automotive and electrical motors, short circuits, and a variety of electrical disturbances. In a more sophisticated age of electronics, they constitute a recurrent nuisance which Ralph Bunt, in his later capacity as part of the radio inspection service, has been seeking out and trying to eliminate for the past 36 years.

The early part of his service was high adventure. In 1926 he was radio operator aboard a revenue cutter engaged in trying to break up the lucrative, private foreign-aid program of supplying rum to thirsty, prohibition-bound Americans. There were storms which he recalls with no pleasure—one blanketed everything so heavily with ice that he barely managed to get a radio signal which helped the skipper find his bearings. The weight of the ice had created a dangerous list long before the ship staggered into port. Nor did he get much pleasure when the customs officers seized \$40,000 in contraband rum hidden under a dock: the entire load—"except for a few bottles that may have been quietly set aside"—was poured down the drain!

Next, he went as a radio operator with the Hudson Straits expedition which in 1927 began a study of ice formation and other conditions in the area which formed a basis for the establishment of the port of Churchill. In 1929, by which time he was in charge of one of the radio stations there, he was posted to Ottawa and in 1930 joined the radio inspection service.

Inspections then included, in addition to tracking down interference, inspection of radio licenses for broadcast receivers and prosecution of radio owners who had not purchased a license, as was required in those days.

There are no such license checks nowadays, but still they manage to keep busy. There are some 32 field offices throughout Canada—from Whitehorse, Yukon to St. John's, Newfoundland—from which approximately 175 inspectors investigate an average of 17,000 complaints of interference, travelling about 800,000 miles a year in 80 specially-equipped automobiles.

Inspectors also check the operation of all radio stations, to ensure that their equipment meets specifications, they keep to their own wavelength, and operate only within the terms of their licenses. Ship radios, for instance, must meet the minimum standards of the International Safety of Life at Sea Convention.

Examination of all candidates for radio-operators' certificates is another duty of the inspectors. Canada's standards are well above the minimum international standard and our certificates are highly regarded throughout the world.

Tracking down and rectifying radio interference hasn't changed basically during Ralph Bunt's service. A major implement then—and now—is a large, two-handed mallet with which the inspector goes about whacking power poles. This is not as silly as it may seem. Interference often is caused by some loose connection in an electronic field. Connections and other hardware concerned with wind-tossed, weather-beaten power lines and supporting posts are apt to come somewhat loose or lose insulation in the course of time. Whacking the pole sets up extensive vibrations which are almost certain to expose to the inspector's instruments any faults that have been responsible for radio interference.

A major cause of interference for many years was a variety of heating pads. One guilty little heating pad could disrupt radio reception in an entire neighbourhood. Tracking it down was not usually difficult. The inspectors drove around in their specially-equipped car, playing an electronic version of "hide-the-thimble". They could tell when they were "hot" or "cold" by the level of



In 1927, Ralph Bunt occasionally broke the tedium of life as a radio operator on Nottingham Island, where Hudson Strait opens into Hudson Bay, by hunting seal.

En 1927, Ralph Bunt, qui était alors opérateur radio sur l'île Nottingham, où le détroit d'Hudson débouche dans la baie du même nom, brisait à l'occasion la monotonie de son travail en chassant le phoque.

disturbance. When it "peaked", they knew they were in the immediate vicinity. Improvements in heating-pad design have almost eliminated this source of disturbance. Any faulty electrical appliance, however, can disrupt both radio and television reception. A frequent offender these days is the fluorescent light: some of them are improperly filtered, resulting in interference.

There always is a shortage of radio inspectors, partly because to date it has been necessary to recruit them from fully qualified radio operators. The situation should improve in the near future, if plans materialize for graduates of technical schools to be hired and trained at D.O.T.'s Air Services School.

Inspectors currently undergo considerable retraining to keep them up to date with developments in the field. Ralph Bunt, whose radio experience dates back to 1920, when he first became a "ham" radio operator, frequently lectures at the department's own school.

A radio inspector needs many sterling qualities, not the least of which is the ability to understand and get along with people. He is, Mr. Bunt claims, the only civil servant who is required to do his work in private homes and, since complaints frequently can erupt into neighbourhood quarrels, he often must be a pretty adept psychologist as well as a skilled technician.



In 1930 Ralph Bunt, above, investigated radio interference with the aid of headphones, a portable receiver and loop antenna. Today John Demers (in fur hat) and Bob Coxe, Ottawa, are shown, left, tracing sources of interference by means of an all-wave communications receiver mounted in a specially-constructed radio van.



En 1930, Ralph Bunt, ci-dessus, repérait les sources de brouillage au moyen d'écouteurs, d'un récepteur portatif et d'un cadre. De nos jours, John Demers (portant casque en fourrure) et Bob Coxe, Ottawa (photo ci-contre) repèrent les sources de brouillage au moyen d'un récepteur de trafic toutes ondes, installé dans une voiture spécialement construite à cette fin.

Suppression du brouillage

par William Dunstan

Services d'information

À son entrée dans la Fonction publique en 1925 à titre d'opérateur radio de navire, Ralph Bunt fut affublé du surnom «Sparks» (étincelles) que portaient également ses collègues.

Ce surnom remonte à l'époque du premier type d'émetteur de tsf qui transmettait des points et des traits au moyen d'impulsions électriques entre deux pôles sous forme d'arc ou d'étincelle. L'énergie qui jaillissait dans l'atmosphère en passant par l'antenne du navire était captée par les appareils récepteurs.

Les temps ont changé. Les étincelles qui constituaient l'essence même des radiocommunications existent toujours mais leur présence n'est plus souhaitée. Elles sont à la source des parasites produits par les moteurs d'automobile et électriques, les courts circuits et diverses perturbations d'origine électrique. En dépit des progrès que connaît l'électronique, ces parasites persistent toujours, et Ralph Bunt, du service d'inspection de la radio, s'applique depuis 36 ans à les déceler et à les supprimer.

Ses premières années de service furent fort aventureuses. En 1926, il occupe un poste d'opérateur radio à bord d'un cotre des douanes chargé de mettre fin au commerce lucratif consistant à fournir du rhum aux Américains qu'assoiffait la prohibition. M. Bunt se rappelle certaines tempêtes qui n'étaient pas de tout repos; au cours de l'une d'elles, la couche de glace recouvrant le navire était si épaisse qu'il réussit à peine à capter un signal radio devant permettre au capitaine de faire le point. Le navire, en raison du poids de la glace, donnait fortement de la bande bien avant d'entrer au port, tant bien que mal. Mais Bunt n'était pas trop enchanté quand les douaniers saisirent du rhum de contrebande pour une valeur de \$40,000 caché sous un quai; toute la cargaison, «sauf quelques bouteilles mises discrètement de côté», fut déversée dans les égouts.

Il fait ensuite partie, à titre d'opérateur radio, de l'expédition du détroit d'Hudson qui en 1927 entreprend dans cette région une étude de la formation des glaces et d'autres conditions en vue d'y établir le port de Churchill. En 1929, alors qu'il a la charge d'une des stations radio de l'endroit, il est affecté à Ottawa et entre en 1930 au Service d'inspection de la radio.

À cette époque, en plus de repérer les sources de brouillage, l'inspecteur devait examiner les licences radio des propriétaires de récepteurs et poursuivre ceux qui n'en avaient pas.

De nos jours, même s'il n'a pas à effectuer ce travail, l'inspecteur a de quoi s'occuper. Le Service d'inspection compte environ 32 bureaux disséminés par tout le Canada, de Whitehorse (Yukon) à Saint-Jean (Terre-Neuve). Le personnel comprend environ 175 inspecteurs qui examinent en moyenne 17,000 cas de brouillage et parcourent environ 800,000 milles par année dans 80 automobiles dotées d'un matériel spécial.

L'inspecteur contrôle également l'exploitation de toutes les stations radio pour s'assurer que leur matériel répond aux normes, qu'elles ne s'écartent pas des fréquences qui leur ont été assignées et qu'elles ne sont utilisées qu'en conformité des conditions mentionnées dans leurs licences. Par exemple, les stations radio

de navire doivent satisfaire aux normes minimums de la Convention internationale pour la sauvegarde de la vie humaine en mer.

L'examen des candidats aux certificats d'opérateur radio constitue une autre fonction des inspecteurs. Les normes fixées par le Canada dans ce domaine sont bien supérieures aux normes minimums internationales et nos certificats sont très bien cotés dans le monde entier.

Les méthodes de repérage et de suppression du brouillage n'ont pas changé fondamentalement depuis que Ralph Bunt a commencé à s'occuper de ce travail. L'outil dont l'inspecteur se servait surtout alors et dont il se sert encore dans la plupart des cas demeure un gros maillet avec lequel il frappe à coups redoublés sur les poteaux qui supportent les lignes de transmission. Ce manège n'est pas aussi stupide qu'on pourrait le croire. Le brouillage est souvent causé par une connexion lâche dans un champ électrique. Les connexions et autres ferrures des lignes de transmission et des poteaux à la merci des intempéries finissent par se desserrer et par perdre leur qualité isolante. Les coups répétés sur les poteaux produisent de fortes vibrations grâce auxquelles l'inspecteur décèle, à l'aide de ses instruments, les défauts à l'origine du brouillage.

Durant plusieurs années, le coussin chauffant a constitué une source importante de brouillage. La réception radio pouvait être brouillée dans tout un quartier par un seul coussin en mauvais état. Le repérage était habituellement facile. Les inspecteurs circulaient dans leur voiture, munie du matériel approprié, et jouaient une version «électronique» d'un jeu d'enfant; c'est ainsi que le niveau du brouillage leur indiquait s'ils «brûlaient» ou s'ils «gelaient». Si le niveau était au maximum, ils se trouvaient dans le voisinage immédiat de la source. Cette source de brouillage a presque disparu en raison des améliorations apportées aux coussins chauffants. Toutefois, tout appareil défectueux peut nuire à la réception des émissions de radio et de télévision. De nos jours, il en est souvent ainsi des appareils d'éclairage fluorescents qui ne sont pas munis de filtres appropriés.

Il y a toujours pénurie d'inspecteurs; c'est que, jusqu'ici, on devait les recruter parmi les opérateurs radio attirés. La situation devrait s'améliorer sous peu si le projet d'engager des diplômés d'écoles techniques et de les former à l'École des Services de l'Air du ministère des Transports se réalise.

Pour se tenir au fait des perfectionnements qui interviennent dans leur domaine, les inspecteurs doivent subir un recyclage très poussé. Ralph Bunt, dont l'expérience en radio remonte à 1920 alors qu'il était radioamateur, enseigne fréquemment à l'école du Ministère.

Un inspecteur doit posséder de nombreuses qualités, notamment celle de pouvoir comprendre les gens et de s'entendre avec eux. Au dire de M. Bunt, c'est le seul fonctionnaire tenu d'effectuer son travail dans des maisons privées et comme les plaintes peuvent souvent dégénérer en querelles entre voisins, il doit être un psychologue doublé d'un technicien compétent.



En frappant, au moyen d'un maillet, un poteau supportant une ligne de transmission, Jean Demers utilise la méthode classique pour produire sur une ligne des vibrations permettant de déceler toutes connexions défectueuses. Bob Cox, au moyen du récepteur de trafic, vérifie si les coups de maillet produisent du brouillage.

Bashing a power pole with a mallet, John Demers uses the standard method of setting up vibration on a line to check for faulty connections. Bob Cox checks the communications receiver for any interference which may result from the blow.



Novel Flashing Floaters For Expo-bound Boaters

A special set of buoys selected by the D.O.T.'s Aids to Navigation division will be "directing traffic" in waters near Montreal this year.

The division came up with the remarkable new buoys as the answer to an unprecedented increase in small boat traffic expected to visit Expo 67 during the summer months.

D.O.T. crews will begin installing 300 of the buoys, made of lightweight glass-reinforced plastic and featuring a unique Xenon signal, early in April.

Each will be placed roughly 4,000 to 6,000 feet apart to mark channels along the Ottawa River between Ottawa and Calumet, on the St. Lawrence from Montreal to Sorel, and on the Richelieu River from Sorel to Granby.

Measuring three feet in diameter, and with a draught of about 28 inches, each of the unsinkable buoys will be anchored in the conventional way, using a 500-lb. weight attached by a synthetic rope such as nylon or polypropylene.

With its signal located four feet above the water line, each is also equipped with a rubber fender to ward off anything which may strike it by accident.

Total weight of the buoy is less than 500 lbs. and its unique design is reported to help the buoy function well in currents of up to four or five knots.

The buoys will have their color impregnated in the plastic, 150 of them a distinctive black and 150 colored bright red. The black buoys will flash a green signal while the red buoys will be equipped with red flashing lights.

Their Xenon signal, visible at a distance of three miles at night, is a type of light never before used in Canada and radically different from the filament-type now in use. Every four seconds, it will flash five pulse-like signals in half a second, followed by an interval of darkness lasting three and a half seconds.

The buoy's battery is built to last eight months at 14 hours a day and will maintain the light's intensity even as its power diminishes. Near the end of its life, the signal varies to warn of the waning power.

Each buoy is equipped with a light-sensitive control which automatically shuts its signal off during the daylight hours.

Overall, say D.O.T. engineers, the new buoys will make the small-boat channel in the Montreal area quite distinct from the regular commercial channel.

The division is so enthusiastic about the buoys, originally developed in England by Stone-Chance and being supplied to the D.O.T. by Computing Devices of Canada, that it is planning to test six of them independently with the Victoria marine agency in British Columbia next year.

Retirements

G. V. (Gerry) Clancey, district purchasing agent for the Dartmouth marine depot in Nova Scotia, retired last October, ending 39 years of service with the agency.

A native of Halifax, Mr. Clancey began his career in June 1927 as a stenographer. In 1938, he transferred to the stores section and was promoted to purchasing storekeeper in 1953. In April 1963, he was promoted to purchasing agent for the Dartmouth marine depot, a position he held until his retirement.

Mr. Clancey was very active during his years with the Department in various employee's associations, holding several offices in the depot bowling league and serving for a time as third vice-president of the Canadian Marine National Employee's Association.

During his off-duty hours, he could be found busily engaged with the Dartmouth Lions Club or out promoting one of its projects. His keen interest in the club led him to the offices of secretary, president, zone chairman and deputy district governor of Lions International.

Fellow employees at the depot, who gathered to extend their good wishes on his retirement, presented Mrs. Clancey with a bouquet of red roses and Gerry with an electric razor, attache case and travel bag.

An ardent sports fan, Mr. Clancey plans to enjoy a leisurely retirement at his summer home in eastern Nova Scotia. With no firm plans for a second career, he says he will be content to enjoy his favorite sports, remain active in the Lions Club, and still remain in touch with the employees of the marine agency through the Wednesday night matches of the bowling league.



Gerry Clancey, left, accompanied by his wife, receives congratulations from F. M. Weston, regional director of marine services at Dartmouth, N.S., after completing 39 years of service. Adding her own farewell is Mrs. E. Spears, right, secretary to the regional director.



Jack Gervais, right, receives a retirement gift and congratulations from Lorne Greenwood, regional superintendent of radio regulations for Toronto. Mrs. Gervais is at centre.

Retirement didn't last long for *J. A. (Jack) Gervais*.

Within a month after the Canadian radio pioneer wound up a 40-year career with D.O.T., he had "signed on" as a radio officer with the Upper Lakes Shipping Company vessel "Cape Breton Minor" and sailed for Rotterdam.

During his lengthy career, which ended in a testimonial dinner held in October, Mr. Gervais spent the last 27 years in Kitchener, Ont., as inspector in charge of the radio regulations office.

Mr. Gervais began in radio in 1925 when he attended the Marconi Marine School of Wireless Telegraphy in Toronto.

His first job was with the Canadian Marconi Company, after which he joined the government service on June 1, 1927, on the Coast Guard ship "Lady Laurier" at Dartmouth, N.S. Later he was transferred to the Red Head direction-finding station at Saint John, N.B., and Canso, N.S., direction-finding station.

In Sept. 1927, he was sent to establish and serve at the first government marine radio station at Churchill, Man. A year later he was transferred to Amery, Man., at the then end of steel of the Hudson Bay Railway.

Mr. Gervais came to the "outside" for an extended vacation in October 1928, then received an assignment to the Coast Guard ship "Mikula," an icebreaker based at Quebec City.

He was posted to headquarters Ottawa in December 1928, where he operated radio station VAA which communicated with

stations on Hudson Bay and Hudson Straits. A year later, he was transferred to the Ottawa traffic section and from this position moved to the radio inspection and interference staff.

In 1937, Mr. Gervais was appointed radio inspector in charge of the Ontario radio regulations office in Kingston. Two years later, he was appointed to the Kitchener office.

Guests at Mr. Gervais' retirement party included H. R. Nason and V. J. R. Brister, both retired regional superintendents of radio regulations.

Chief Steward Retires

C. M. (Larry) Houston, chief steward aboard the CCGS "Alexander Henry", retired recently, ending 18 years of service with the Department of Transport.

A gift from the officers and crew of the ship was presented to Mr. Houston by F. K. McKean, district marine agent at Parry Sound, while Mrs. Eileen Docherty, the ship's waitress, presented a bouquet of yellow roses to Mrs. Houston.

Mr. Houston began his service with the Department in 1948, serving as chief steward on the CCGS "C. P. Edwards" until he was transferred to the "Alexander Henry".

The Houstons plan to enjoy their retirement in their new home in nearby Midland and, as Mr. Houston says, take a few trips to see Canada by land "since I've seen plenty of it by water."



F. K. McKean, left, district marine agent at Parry Sound, Ont., presents a farewell gift from the officers and crew of the CCGS "Alexander Henry" to retiring Chief Steward Larry Houston, while Mrs. Houston, who received a bouquet of roses, looks on.

Cross Canada Dateline

Thompson, Man.—A new air terminal to serve this northern Manitoba mining centre was declared officially open last Nov. 11 by the province's Industry and Commerce Minister Sidney Spivak.

The terminal building was financed partly by the local government District of Mystery Lake with the assistance of some \$83,000 from D.O.T.

The new terminal will house the Department's aeradio and meteorological facilities in addition to freight and passenger services for the community of 11,500 people.

Proposal to Monitor Runway Discharge Beacons Wins Award

J. F. Hawkes, Edmonton district electrical serviceman, is \$80 richer through suggesting a monitor system for condenser discharge beacons which are used as runway threshold identifiers.

The system will enable airport operating personnel to confirm that the beacons are in operation during periods of bad weather and will be particularly important to airports in isolated areas.

Prior to Mr. Hawkes' suggestion, visual confirmation was the only way the beacons could be checked.

A \$30 award was presented to L. S. Bates, a radio inspector at Sydney, N.S., who suggested that all marine casualty reports issued by search and rescue authorities contain specific reference to D.O.T. stations that originate them.

Mr. Bates, who is attached to the Department's Moncton region, made his suggestion "as a means of providing better public awareness of the services which are provided by the marine radio stations."

Officials at all Canadian Forces' search and rescue stations have readily agreed to co-operate.

A \$15 suggestion award went to S. C. Larade, a fireman at the Sydney, N.S., airport, who suggested that smoke pots be used to train airport firemen to pinpoint fires in the field.

A \$10 award was presented to P. W. Copeman, a radio operator at Alert Bay, B.C., for suggesting that a morning weather broadcast would aid local salmon fishermen to make an early start if weather conditions appeared favorable.

Floyd Budd, who was reported in our previous issue as a suggestion award winner, usually is known as Lloyd Judd. Sorry, Lloyd!



Industry and Commerce Minister Sidney Spivak of Manitoba snips the ribbon to open the new air terminal at Thompson. Assisting him are W. E. Fenn, left, regional director of air services at Winnipeg, and T. M. Gaetz, right, assistant vice-president of the International Nickel Company of Canada. The company helped finance construction of the original airport.

Vancouver—A service established last year by the Vancouver weather office in co-operation with interested radio stations in the area, has been given credit by the B.C. Safety Council for a significant drop in the number of lives lost among small craft owners operating in coastal waters.

In a letter to T. G. How, regional director of air services, the council said that four lives were lost during the 1966 season compared to 33 persons, who died the year before because boaters took their vessels out in weather for which the craft were not equipped.

"We place a great deal of emphasis in the saving of lives on the weather reports designed and issued by your office," the council said. "Our board of directors has discussed this matter and they will be writing you an official letter of thanks for this service."



W. H. Mackie, regional superintendent of observing services for the Vancouver region, presents a book award to P. Plaistowe, chief officer of the S.S. Waihemo on behalf of the Meteorological Branch.

SHIP HONORED

Vancouver—A New Zealand ship, one of 140 merchant and government ships making voluntary marine weather observations for Canada, was recently honored for its work by the Meteorology Branch.

The S.S. Waihemo, owned by the Union Steamship Company of New Zealand and under the command of Captain A. Dodds, made close to 10,000 weather reports during her nearly 20 years of sailing between Vancouver and Australasia which ended last year as the result of sale to new owners.

The ship's award, a copy of the book "The Wondrous World of Fishes," was presented to Chief Officer P. Plaistowe by W. H. Mackie, regional superintendent of observing services for the Vancouver Air Services Region.

The ship's senior radio officer, R. F. Elsom, also received an award in recognition of his valuable assistance in transmitting the weather reports to shore receiving stations.

The Branch makes these awards annually to certain masters, deck officers and radio officers in recognition of outstanding work in providing weather observations on the high seas, Canadian coastal waters, and the Great Lakes.

In selecting the award winners, the number of observations made and their overall accuracy are taken into account. Of the 140 participating ships, the best 20 per cent are singled out to receive the awards.

Tribute to Snag

Snag—With the closing of the Department's weather station at Snag, an era has passed into history.

For years the very name has been synonymous with frigid temperatures. No place in North America registered official temperatures as low as those at Snag.

On the coldest of mornings there was a measure of comfort to be gained from learning how much colder it was at the Yukon weather outpost.

Of course, local pride may have been wounded on occasion when records of 50 or 60 below were compared with the continent's all-time record of 81.4 below, recorded at Snag on Feb. 3, 1947.

But this was an easy price to pay for the insulation provided against our cold by the knowledge that men at Snag were facing much worse and surviving.

It remains to be seen whether the new location of the weather station (it's now at Burwash Landing) can produce temperatures to excite the imagination like those of Snag.

"SHE"

Why is a ship always referred to as "she"? One admirer has come up with 14 good reasons:

1. She's all decked out and often well stacked.
2. She has a waist and stays and requires a lot of rigging.
3. There is usually a lot of bustle around her and she always manages to show her superstructure to advantage.
4. Bows and bells are standard equipment and she sometimes wears a bonnet.
5. She has pleasing lines from stem to stern and there's usually a gang of men around her.
6. It's not the initial expense that breaks you, it's usually the upkeep.
7. It takes a lot of paint to maintain her best appearance.
8. In some parts of the world the man who takes care of her is known as her husband but she leaves him at home when she goes out.
9. She always knows her destination and her watchword is caution.
10. When entering port, she heads for the buoys.
11. When you want to attract her attention, a whistle is the appropriate signal.
12. As soon as she gets home, all her lines are busy.
13. On a balmy day or a moonlit night, she can make any tired businessman forget his troubles.
14. Once you get to know her, you never want to leave her.



Georges Martin

Un maire aux Transports

Ottawa—Depuis le 5 décembre dernier, le ministère des Transports compte un maire à son emploi. Il s'agit de M. Georges Martin, agent technique à la Direction des télécommunications et de l'électronique.

Georges, célibataire âgé de 33 ans, a été élu maire de Rockland, ville sise à 25 milles à l'est d'Ottawa. Il a défait le maire sortant, M. Eugène Laviolette, avec une majorité de 102 voix.

Georges a de grands projets pour sa ville. Malgré son jeune âge, il a une vaste expérience de l'administration, ayant siégé comme conseiller municipal pendant quatre ans.

Au lendemain de sa victoire aux urnes, ses compagnons de travail lui ont présenté une «chaîne d'office» faite de papier. Une nouvelle inscription à la porte de son bureau se lisait ainsi: «Georges Martin, maire de Rockland.»

Membre du club Richelieu et des Chevaliers de Colomb, le nouveau maire de Rockland est un ardent sportif qui s'intéresse surtout à l'organisation des loisirs des jeunes.

The Mayor of D.O.T.

Ottawa—A 33-year-old technical officer in the Telecommunications Branch has been elected mayor of Rockland, Ont., a town of 4,000 located 25 miles east of the Capital.

Georges Martin, a D.O.T. employee for the past four years and a former town councillor, beat his opponent, who had been mayor of Rockland for six years, in a close race during the December election.

Fellow employees presented the youthful mayor with a "chain of office" made from paper and a hand-lettered sign for his desk labelled "Mayor."

Mr. Martin, a bachelor who has three brothers and a sister, says he plans to "put Rockland on the map."

A member of the Richelieu Club and the Knights of Columbus, the new mayor is an active sports supporter.



NEW SKIPPER—Captain E. J. Vezina, shown on bridge of the CCGS "Alexander Henry", has taken command of the ship at Parry Sound, Ont. Capt. Vezina, who sailed the CCGS "Skua" out of the Parry Sound marine agency during the summer, has 33 years experience behind him, including a stint in the navy and D.O.T. duty on the East Coast and in Arctic waters.

Canadian Coast Guard **A L B U M** de la Garde côtière



The CCGS "C. D. Howe," assigned to Eastern Arctic Patrol and lighthouse supply duty, is based at the Department of Transport marine agency at Quebec City.

CCGS. "C. D. HOWE"

LENGTH: 295 feet
BREADTH: 50 feet
DRAFT: 18 feet, six inches
POWER: Steam, 4,000 I.H.P.
GROSS TONNAGE: 3,628 tons

Le n.g.c.c. «C. D. Howe», affecté à la patrouille de l'est de l'Arctique et au service de ravitaillement des phares, a son port d'attache à l'Agence de la marine du ministère des Transports à Québec.

N.G.C.C. «C. D. HOWE»

LONGUEUR: 295 pieds
LARGEUR: 50 pieds
TIRANT D'EAU: 18 pieds, six pouces
PUISSANCE: vapeur, 4,000 cv
JAUGE BRUTE: 3,628 tonneaux

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MARCH-APRIL 1967
MARS-AVRIL 1967



GIANT

new headquarters to

VOLUME 18 • NO. 2

MARCH-APRIL 1967 — OTTAWA
MARS-AVRIL

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COVER

A scale model of the proposed new headquarters of the Department of Transport in Ottawa shows the shape of things to come.

COUVERTURE

Une maquette nous fait voir l'immeuble du ministère des Transports dont on se propose d'entreprendre la construction dans un avenir rapproché.

Editor

Bryan Goodyer

Rédacteur français Edouard Deslauriers

THE DOT is a Department of Transport staff magazine published under the authority of the Minister, Hon. J. W. Pickersgill, by the Information Services Division.

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ROGER DUHAMEL F.R.S.C., QUEEN'S PRINTER AND
CONTROLLER OF STATIONERY, OTTAWA, 1967

ROGER DUHAMEL M.S.R.C., IMPRIMEUR DE LA REINE
ET CONTRÔLEUR DE LA PAPETERIE, OTTAWA, 1967

A \$35,000,000 building with twin towers rising 21 stories above ground level is expected to become the new headquarters of the Department of Transport by 1972.

About 6,300 people will work in the giant new building, to be built near the centre of Ottawa and flanked by two bridges and the Rideau Canal.

Of the 6,300, about 2,600 will be strictly D.O.T. employees. Other tenants will include personnel with Treasury, Translation, Queen's Printer, Health Unit and the new Transportation Commission.

The remainder of the space will be occupied by others on a time basis to eventually provide expansion space for Transport and related units which will form the new concept of transportation headquarters for Canada.

The new building, its tall towers located at diagonal corners, is expected to contain as many as 30 elevators and two mechanical mail conveyors (one in each tower), and provide 1,070,000 gross square feet of fully air-conditioned space.

An adjacent parking garage connected to the building by a walkway will be able to accommodate approximately 700 cars.

The first D.O.T. employees are expected to begin moving into the building by mid-1971. It will be completely occupied by Transport in 1972 and full occupancy is expected in 1973.

The site is bounded on the north by the Mackenzie King Bridge, on the east by Nicholas Street, on the south by the Laurier Avenue Bridge, and on the west by Colonel By Drive, which skirts the eastern bank of the Rideau Canal.

It will be the first construction in what is known as the East Bank Development which is a portion of the master program for development of the national capital area.

At present, the Department is scattered in six buildings around Ottawa in addition to a number of air services staff located at Ottawa International Airport.

The six buildings are the Hunter Building, Number Three and Number Four temporary buildings, the Trafalgar Building, the Garland Building and a building at 340 Queen St. containing stationery stores.

Detailed plans and sketches of the new headquarters building, including a scale model of it, have been presented to Transport Minister J. W. Pickersgill by the consulting architects for the project, John B. Parkin Associates, an international firm with headquarters in Toronto.

The building will be built by the Department of Public Works.

e built for d.o.t.



The scale model of the proposed new headquarters building for the Department of Transport is shown above in a view from the side. In the foreground is the Mackenzie King Bridge. The Laurier Avenue Bridge is on the opposite side of the building and Colonel By Drive and the Rideau Canal are on the right. The 700-car parking garage can be seen connected to the main part of the building by means of a walkway. When completed, the building will become transportation headquarters for Canada.

Cette photo nous fait voir la maquette du nouvel immeuble du ministère des Transports. On prévoit que l'édifice sera mis en chantier dans un avenir rapproché et la construction achevée vers 1972. Au premier plan, on aperçoit le pont Mackenzie King. De l'autre côté de l'immeuble se situe le pont de l'avenue Laurier, et, à droite, la promenade Colonel By et le canal Rideau. Le garage de stationnement pour quelque 700 automobiles est relié à la partie centrale de l'immeuble par une promenade.

Un immeuble à la fois vaste et imposant, comportant des tours jumelées, disposées en diagonale et hautes de 21 étages, deviendra vers 1972 le nouveau siège du ministère des Transports.

Cet immeuble, qui coûtera 35 millions de dollars, s'élèvera près du centre d'Ottawa et sera longé par deux ponts et le canal Rideau. Il abritera un personnel d'environ 6,300 fonctionnaires, dont 2,600 du ministère des Transports.

Il logera également le Service de traduction, le Bureau du Trésor, l'unité sanitaire et la nouvelle Commission canadienne des transports, ainsi que des employés de l'Imprimerie nationale.

Le reste de l'espace sera occupé temporairement par d'autres services qui, éventuellement, devront déménager au fur et à mesure que le ministère des Transports et les organismes connexes prendront de l'expansion.

L'immeuble contiendra 30 ascenseurs et deux transporteurs mécaniques de courrier (un dans chaque tour), et ses locaux climatisés offriront une surface brute de 1,070,000 pieds carrés.

Un garage de stationnement relié à l'immeuble par un passage pourra recevoir environ 700 voitures.

L'emménagement des fonctionnaires du ministère des Transports commencera au milieu de 1971 et se terminera en 1972. L'immeuble sera entièrement occupé en 1973.

L'emplacement est borné au nord par le pont Mackenzie King, à l'est par la rue Nicholas, au sud par le pont de l'avenue Laurier et à l'ouest par la promenade du Colonel By qui longe la rive est du canal Rideau.

La construction du nouvel immeuble représentera les premiers travaux exécutés dans le cadre de l'aménagement de la rive est qui s'intègre dans le plan directeur d'aménagement de la région de la capitale nationale.

A l'heure actuelle, les services du Ministère sont installés dans six immeubles d'Ottawa et certains employés des Services de l'Air sont à l'aéroport international d'Ottawa.

Les six immeubles en question sont l'immeuble Hunter, les immeubles temporaires n^{os} 3 et 4, l'immeuble Trafalgar, l'immeuble Garland et un immeuble situé au 340 de la rue Queen qui abrite les fournitures de bureau.

Les plans et esquisses de détail et la maquette du nouvel immeuble ont été présentés à l'honorable J. W. Pickersgill, ministre des Transports, par les architectes-conseils, John B. Parkin Associates, maison internationale dont le siège se trouve à Toronto.

L'immeuble sera construit par le ministère des Travaux publics.

le nouvel immeuble du ministère des transports

THE MANY ROADS TO expo67

by Bryan Goodyer

Information Services Division

At the \$21,000,000 Canadian government pavilion at Expo 67, engineers are completing final tests on three radio-controlled ship models which form part of the Department of Transport display.

At the same time, D.O.T. air services personnel at nearby Montreal International Airport and at the Canadian Forces base at St. Hubert, Que., are awaiting a record number of planes and passengers expected to arrive this summer.

Both groups represent transportation, an ingredient critical to the success of the exposition billed as "the world in a thousand acres," the gigantic Canadian Corporation for the 1967 World Exhibition.

From opening day on April 28, the first of an expected 10,000,000 visitors are expected to start streaming into Montreal at the rate of 145,000 a day and at 350,000 a day during the peak summer months of July and August.

"They'll be coming by car, bus, subway, train, plane, bicycle, motorcycle, boat, luxury liner, helicopter and even by hovercraft," said an Expo executive.

"We expect some will walk and maybe even a few will swim to Expo," he added, looking out at the site across the wide St. Lawrence River where workmen were hurrying final preparations for the six-months-long extravaganza.

Getting visitors to Expo is a job that not only involves every aspect of the Canadian transportation network but a large part of the world's travel facilities as well.

At Montreal International Airport, the Department of Transport is anticipating an increase of between 15 and 20 per cent in the volume of passengers passing through the terminal during Expo since a number of the 10 trans-Atlantic airlines now flying into Montreal once a week are planning daily service.

With this in mind, facilities at St. Hubert have been set up so that Expo visitors may land and park their private aircraft, clear customs and immigrations installations if they are from outside the country, then drive or take a bus to the Fair site, 15 miles from the airport.

There are also a number of alternative landing strips in the Montreal area, including St. Jean, 25 miles south of Montreal, and at St. Jovite and Trois-Rivières, both north of the city and both with regular bus service available to fair-goers.

Many people will arrive at Montreal, the world's largest inland port, by passenger liner.

The majestic "France," at 66,000 tons the largest passenger ship ever to have sailed the St. Lawrence, will tie up at Quebec City on May 9 and July 18.

The 43,000-ton "Michelangelo" will call at Genoa, Cannes and Gibraltar before docking in Quebec on May 29.

Both ships will be used as floating hotels, their passengers being taken to and from Expo by bus during their stay since the draughts of the ships are too deep to allow them to sail to Montreal.

Canadian Pacific's "Empress of Canada" and "Empress of England" will make 25 calls to Montreal from Liverpool during Expo.

Hundreds of other visitors are expected to arrive aboard private yachts and pleasure craft. Advance reservation for

berthing space at the Expo marina is heavy and D.O.T. is handling dozens of requests for information from small craft owners across North America.

Of the estimated number of visitors, 80 per cent, or 8,000,000, are expected to drive to Montreal, a fact that spurred an immense road building program covering 392 miles and costing more than \$400,000,000.

To handle all these cars, Expo had to build a number of parking lots adjacent to the site. Among the larger, one has a capacity of 13,000 cars and a second can handle 10,000.

In Canada and the United States, about 1,265 bus companies plan to expand their services to Montreal and to organize special package tours during the Fair.

In a pool service with Colonial Coach Lines, Greyhound Bus Lines will operate three buses from Calgary every day across the prairies and Northern Ontario to Montreal in a trip that will take 51 hours.

During the daylight hours, a bus will leave New York for Montreal every hour.

Canadian National Railways is adding an advanced turbotrain to its Montreal-Toronto run that will cut the travelling time to four hours between the two cities.

Canadian Pacific has announced that it will operate a second transcontinental passenger train in addition to "The Canadian." To be called the "Expo Limited," it will leave Vancouver every day at 10 p.m., arriving at Toronto 77 hours and 45 minutes later.

Once visitors have checked into a hotel or other accommodation, they can reach the Expo grounds by city bus, taxi, or by Montreal's gleaming new subway, the "Metro."

Place d'Accueil, Expo's main entrance, is only five minutes from the city's hotel district.

On the site, Expo's mass transit system, the Expo Express, will whisk visitors to the four main areas of the exhibition. The silver-colored, air conditioned cars of the electric express can handle as many as 30,000 passengers an hour.

Every 2½ minutes, a sleek Expo Express will leave the main entrance and travel the 3½ miles of track in roughly 10 minutes.

Other transit systems on the site include a minirail network on which small open trains run beside, between and even through some pavilions. Trackless trailer trains which resemble caravans and small pedicabs operated by students will roam the grounds.

Plying the site's canals, lagoons and waterways will be an assortment of ferries, sampans and gondolas.

A 38-passenger hovercraft will skim over the water on a cushion of air at 50 knots between a special landing ramp at the downstream end of St. Helen's Island and one at Harbour City, which is near the main Expo entrance.

Passengers arriving at Montreal International Airport may also be able to reach Expo by helicopter. A landing pad for the regularly-scheduled service will also be used for short flights around the perimeter of the exposition.

As one observer summed it up: "If there are any radically new types of transport invented between now and opening day, you can be sure they will be used to carry people to and from Expo."



Expo Express links pavilions with the amusement and park areas at the 1967 World Exhibition in Montreal. Fully air-conditioned cars with panoramic windows can handle up to 30,000 passengers an hour in each direction on a 3½ mile track. There is no charge on Expo Express and visitors may use the system as often as they wish.

Les visiteurs de l'Exposition universelle de 1967 peuvent se déplacer gratuitement, de façon rapide et aussi fréquemment qu'ils le désirent, entre les différents secteurs de l'Expo. Ils le font à bord d'un Expo-Express commode, attrayant, mû à l'électricité et construit au Canada. Expo-Express constitue l'élément le plus important d'un réseau complexe de transport rapide prévu pour l'Exposition et qui est le plus moderne de son genre au monde.

TOUS LES CHEMINS MÈNENT À L'expo67

par Bryan Goodyer

Division des services d'information



Au pavillon du gouvernement canadien à l'Expo '67, dont l'aménagement coûtera 21 millions, les ingénieurs effectuent les derniers essais des trois modèles de navires télécommandés qui font partie de l'étalage du ministère des Transports.

Pour sa part, le personnel des Services de l'Air du ministère des Transports à l'aéroport international de Montréal et celui de la base des Forces canadiennes de Saint-Hubert (P.Q.) se préparent à recevoir un nombre sans précédent d'avions et de passagers.

Ces deux groupes d'employés sont rattachés au domaine des transports, un élément de souveraine importance dans la réussite de l'exposition organisée par la Compagnie de l'Exposition universelle canadienne de 1967 et qui présentera "le monde entier circonscrit dans une superficie de mille acres".

Dès l'ouverture de l'Expo, le 28 avril, arriveront à Montréal les premiers des 10 millions de visiteurs attendus au rythme de 350,000 par jour durant les mois de juillet et d'août et de 145,000 par jour au cours des autres mois.

"Ils arriveront par voiture, autobus, métro, train, avion, bicycle, motocyclette, bateau, paquebot de luxe, hélicoptère et même par hydroglisseur", a déclaré un dirigeant de l'Expo.

"Certains viendront à pied et même quelques-uns traverseront à la nage", a-t-il ajouté en contemplant l'emplacement situé de l'autre côté de la large étendue du fleuve Saint-Laurent où les travailleurs se hâtaient de terminer les derniers travaux préparatoires à la tenue de cette spectaculaire manifestation qui se prolongera pendant six mois.

Le transport des visiteurs à l'Expo sera assuré non seulement par l'ensemble du réseau de transport du Canada mais aussi par une grande partie des moyens de transport du monde entier.

Le ministère des Transports s'attend que le volume des passagers qui passeront par l'aéroport international de Montréal durant l'Expo augmentera de 15 à 20 p. 100; de fait, certaines des dix compagnies de transport aérien transatlantique qui exploitent à l'heure actuelle un service hebdomadaire jusqu'à Montréal projettent d'inaugurer un service quotidien.

On a donc établi à l'aéroport de Saint-Hubert des installations permettant aux visiteurs de l'Expo d'y poser et d'y stationner leurs avions privés, de satisfaire aux formalités de la douane et de l'immigration s'ils viennent de l'extérieur du pays et de se rendre par voiture ou par autobus à l'Expo, distante de quinze milles.

Il y a également dans la région de Montréal d'autres bandes d'atterrissage que les avions pourront emprunter, notamment à Saint-Jean, à 25 milles au sud de Montréal, ainsi qu'à Saint-Jovite et Trois-Rivières, situés au nord de la ville et dotés d'un service d'autobus régulier qui sera à la disposition des visiteurs.

Plusieurs visiteurs se rendront à Montréal, le plus grand port intérieur du monde, par paquebot.

Le majestueux FRANCE, qui jauge 66,000 tonnes et qui sera le plus gros paquebot à avoir remonté le Saint-Laurent, accostera à Québec le 9 mai et le 18 juillet.

Le MICHAELANGELO, de 43,000 tonnes, fera escale à Gènes, à Cannes et à Gibraltar avant de jeter l'ancre à Québec le 29 mai.

Ces deux navires qui, en raison de leur fort tirant d'eau, ne pourront se rendre à Montréal serviront d'hôtels flottants et leurs passagers feront le voyage aller-retour à l'Expo par autobus au cours de leur séjour.

L'EMPRESS OF CANADA et l'EMPRESS OF ENGLAND, exploités par le Pacifique-Canadien, accompliront 25 voyages entre Montréal et Liverpool durant l'Expo.

Des centaines d'autres visiteurs sont censés se rendre à l'Expo à bord de yachts et d'embarcations de plaisance privés. La réservation de postes à quai au port de plaisance de l'Expo est déjà considérable et le ministère des Transports répond à des douzaines de demandes de renseignements de la part de propriétaires d'embarcations de toute l'Amérique du Nord.

80 p. 100 des visiteurs, soit 8 millions, sont censés se rendre à Montréal en automobile, ce qui a hâté la réalisation d'un vaste programme de construction de routes sur une longueur de 392 milles et dont le coût s'élèvera à plus de 400 millions.

La Compagnie de l'exposition a dû construire à proximité de l'emplacement de l'Expo des terrains de stationnement dont un d'une capacité de 13,000 voitures et un autre de 10,000.

Environ 1,265 compagnies d'autobus du Canada et des États-Unis projettent d'étendre leurs services jusqu'à Montréal et d'organiser des voyages spéciaux tout compris durant l'Exposition.

Les Greyhound Bus Lines assureront un service en commun avec les Colonial Coach Lines. Chaque jour, trois autobus partiront de Calgary pour Montréal, en passant par les Prairies et le nord de l'Ontario. Le voyage prendra 51 heures.

Durant le jour, un autobus quittera à toutes les heures New York à destination de Montréal. Les chemins de fer Nationaux du Canada mettront en service sur le parcours Montréal-Toronto un turbo-train moderne qui réduira à quatre heures la durée du parcours entre les deux villes.

Le Pacifique-Canadien a annoncé qu'il exploitera un deuxième train de voyageurs transcontinental en plus du *Canadian*. Ce train s'appellera *Expo Limitée*; il quittera Vancouver à 10 heures du soir, tous les jours, et arrivera à Toronto 77 heures et 45 minutes plus tard.

Une fois que les visiteurs se seront installés à l'hôtel ou ailleurs, ils pourront se rendre sur les terrains de l'Expo par le service urbain d'autobus, par taxi ou en empruntant le tout nouveau Métro de Montréal.

L'entrée principale de l'Expo, la Place d'accueil, n'est qu'à cinq minutes du quartier des hôtels.

Sur les terrains de l'Expo, le service de transport en commun sera assuré par *Expo Express* qui amènera rapidement les visiteurs aux quatre principaux secteurs de l'Exposition. Les voitures climatisées de ce train électrique de couleur argent peuvent transporter 30,000 voyageurs à l'heure. A toutes les 2½ minutes, un train aérodynamique quittera l'entrée principale et franchira en une dizaine de minutes les 3½ milles de voie ferrée.

Les autres réseaux de transport sur les terrains comprendront un minirail dont les petits convois de voitures découvertes longeront les pavillons, circuleront entre eux et même les traverseront. Des remorques sur pneus genre caravane et de petits pousse-pousse conduits par des étudiants circuleront également sur les terrains.

Des barques, des sampans et des gondoles de tous genres évolueront sur les canaux, les lagunes et les voies navigables.

Un hydroglisseur, pouvant transporter 38 passagers, effleura la surface de l'eau sur un coussin d'air à une vitesse de 50 noeuds

entre une rampe spéciale de débarquement à l'extrémité aval de l'île Sainte-Hélène et une autre rampe à la cité du Havre, près de l'entrée principale de l'Expo.

Il se peut que les passagers qui débarqueront à l'aéroport international de Montréal puissent aussi se rendre à l'Expo par hélicoptère. Une aire d'atterrissage réservée aux services à horaire fixe sera également utilisée pour des vols de courte durée, permettant aux visiteurs de survoler l'emplacement de l'Exposition.

Voici comment un observateur résumait la question: "Si d'ici l'ouverture de l'Exposition on inventait des moyens de transport révolutionnaires, ils seraient sûrement utilisés pour le transport des visiteurs."



The Mini-rail will make up part of the secondary transportation system on the Expo 67 site. It's a single, elevated rail vehicle with open cars each carrying 12 persons. It is a mono-rail system in miniature.

Le réseau auxiliaire de transport en commun de l'Expo 67 comprendra un "mini-rail". Monorail en miniature, le "mini-rail" comporte des wagons ouverts, pouvant transporter 12 personnes chacun en roulant sur un rail unique.



the d.o.t. at expo

An Expo hostess awaits the fair's opening



From computers to model icebreakers, the Department of Transport has an eye-catching set of displays assembled for the visitor to Expo 67.

Some of the D.O.T.'s major exhibits will include:

—Participation in the Expo 67 Computer Project in the law and government area of the Canadian pavilion.

Here, the idea is to give the visitor the opportunity to work through a series of programmed questions while seated at a typewriter-style keyboard with a video screen in front of him.

In this manner, he will engage in a "dialogue" with the computer on a subject he has chosen from a given list. The overall purpose of the project is to make the visitor aware of the problems involved in the vast field of transportation.

—A marine services display in a 100-foot by 150-foot pool outside the Canadian pavilion.

Here, three working models of Canadian Coast Guard ships, a small lighthouse and a miniature ice mass will demonstrate the D.O.T.'s role in icebreaking.

In a show that will be repeated hourly, a "carrier" will leave a small dock and steam across the pool where she will become jammed fast in the artificial ice, made from cakes of parafin topped with a layer of styrofoam representing snow.

Then the icebreaker, a model of the recently-launched CCGS Louis S. St-Laurent, will leave her berth and cross the pool to clear a path for the carrier through the ice.

While this is going on, a lighthouse supply and buoy-laying vessel will leave for the lighthouse to deliver cargo, lay a buoy and retrieve it before returning to the dock to complete the show.

—A \$35,000 installation manned by the Met branch to provide continuous special weather services to the operations control centre on the fair site.

This will include hourly weather observations from the site and from Montreal, short and medium range forecasts for the grounds, and periodic observations from major cities around the world.

To provide the information, an automatic weather observing station will be installed and operated on the site.

Weather bulletins will also be posted on a system of electronic notice boards located throughout the grounds that will include traffic reports and changes in programs for the Expo visitor.

—Air traffic control procedures will share the spotlight in an audio-visual display developed for Expo's "Man the Producer" theme building.

Involved in the display are several groups including the D.O.T. and the International Civil Aviation Organization.

automatic weather stations for the supersonic age

by William Dunstan

Information Services Division

Five automatic weather stations, to be installed for a total cost of some \$250,000, will help D.O.T. prepare ground support for tomorrow's supersonic transports.

When those huge SST's arrow from continent to continent within the next decade, they will need approach clearance while still more than 1,000 miles from target—indeed, clearance even before take-off will eventually be normal procedure. This will demand fairly precise knowledge of what the weather will be like within fractions of an hour. Accordingly, increased attention is being given to mesometeorology, which is concerned with weather changes within distances of miles and tens of miles and, therefore, within a short space of time.

Tenders have been called for the weather stations, which were designed and developed within the Meteorological Branch. These first production-type stations will assist Dr. Joseph Clodman, supervisor of the synoptic and dynamic research units, in a mesometeorological research project which involves the collection of data within the general area of Toronto International Airport.

The automatic weather station was designed by Jay Dickson, an electronic design specialist of instrument division, who also built a test model of the prototype. The stations are instrumented to record cloud cover, visibility, temperature, dew point, wind speed, wind direction, altimeter setting or pressure, and precipitation in 100th inches. Each weather station sends its reports to a recording centre via cable for compilation and analysis. It can be adapted to report by radio if required.



Tom Burling, of the synoptic research unit, shows mesometeorological network.

The project began about four years ago, with Mr. Dickson engaging in design and construction while project management was handled by Henry Belhouse, supervisor of electronic and upper air instruments engineering and research.

Extensive field tests included a three-month trial at Wiarton, Ontario, where the findings of the automatic station were satisfactorily compared with the hourly reports of the aviation station located there.

Delivery of the five stations likely will not occur before next fall, by which time the test model will have performed a very useful service. It is to be installed at Expo 67 from where it will submit regular weather reports for the information of those who plan to attend Canada's world's fair.

But back to Dr. Clodman, who already has experimented with regular observations from various points in the testing area. Similar studies have been made elsewhere, he says, but in other cases the recording stations were placed at regular intervals throughout the area concerned, while physical features of the terrain were largely ignored. He considers that local features—topography, bodies of water and urban effects, for instance, have considerable bearing on short-term weather forecasting. He has, therefore, set up stations where such features may be expected to make appreciable local changes in weather.

Local influences are only part of the picture, of course. In scientific parlance, Dr. Clodman hopes that the network will provide "information on the physical mechanisms which are involved in the interactions between synoptic scale processes, meso-scale eddies and local influences."

It is possible that these automatic weather stations will have a wide application. A number of proposals has already been made by regional offices as to their field operational use.

The introduction of the automatic station is not without new problems of its own. For years, the definition and coding of many weather quantities have been based upon the discretionary powers of the human observer. The automatic station, on the other hand, makes precise and objective measurements that do not involve judgment and in some cases these must be defined and coded in a different way.

This problem was one of the main topics of discussion at a world conference in Geneva recently, attended by both Mr. Dickson and Mr. Belhouse. The attitude taken was that there are obvious limitations in the duplication of all human accomplishments by machine and this should not necessarily be the goal to pursue. Since the automatic station does perform certain functions reliably and well, procedures should be adapted to take advantage of the benefits it can offer.

Only continuous research can broaden the scope of usefulness of the automatic weather station. Whatever the outcome, it is certain that the knowledge necessary to improve short-term weather forecasting is increasing through this and other research projects. Some of what is learned today may keep many a supersonic aircraft out of trouble tomorrow.

DEMOLITION

coast guard style

By P. R. Toomey

Cadet Supervisor
Canadian Coast Guard College



The following article, which tells the rather unusual story of how CCGS "Sir William Alexander" demolished a house near Lunenburg, N.S., is taken from The Dolphin, published by the cadets of the Canadian Coast Guard College at Point Edward, N.S.

Among the many and varied facets of Canadian Coast Guard operations, one of the least known but most entertaining is that of a certain demolition job.

One immediately thinks of sticks of dynamite, bulldozers and swinging iron balls, but the Coast Guard is far more original than that.

This story began when a new light was erected on Cross Island, one of the outer islands guarding the port of Lunenburg, N.S.

The new tower was erected right alongside the vacant house of the lightkeeper this being a better location than the old one. The only problem was that the old wooden house masked the new light and it was obvious that the building would have to come down.

CCGS "Sir William Alexander" had the assignment of erecting the new light, so it fell to her to tackle the problem presented by the old building.

It was summertime and, as has been known in those waters from time to time, foggy. The ship lay at anchor off the landing

while its crew went ashore to begin the task of dismantling the house, armed with the traditional crowbars, axes and power saws.

Although everyone worked hard and a good time was had by all, it seemed when the fog lifted the next morning that the house looked almost the same as it had the day before.

Overnight, however, some thinking had been going on and an idea had come to someone along with the clearing weather needed to put it into action.

The crew set off again, armed as before, but taking with them this time almost all the heavy mooring wires in the ship. They then proceeded to rig a monster sling around the upper storey of the house, leading the hauling part over the cliff and to the water's edge.

At this point, the ship weighed anchor and inched in towards the beach until less than a quarter of a mile off and the ship's barge came out to take the rest of the mooring wires bent together to connect up to the sling around the house.

When the connection had been made and the wire made fast on board, all hands stood back and the ship moved slowly astern. The wire slowly surfaced, drew taut—and suddenly sang like a harpstring and parted!

Round One to the house and the sturdy Lunenburgers who built it.

In the next half hour, the tow was connected again, this time with some rope inserted to add a little spring to the half-mile of wire.

Once more the ship moved astern, gently as can be. The rope came taut again, sang some more and all of a sudden the top storey detached itself and fell in a cloud of dust alongside the rest of the building, which promptly collapsed.

All that remained intact was the roof, where the swallows which had been nesting there continued to feed their young, rather surprised no doubt to find themselves living ranch-style so close to the ground!

From this point, the job was easy. The old tractor from the light station towed the pieces to the edge of the cliff, over which they were dumped to the rocks below. The rest of the site was cleared during the afternoon.

In the evening, a monster bonfire was lit at the foot of the cliff to consume every last piece to prevent it from washing away and playing havoc with fishermen's nets.

It was unfortunate that the swallows should fall victim to eviction, but the new light now shone bravely out from Cross Island as the "Sir William Alexander" steamed away that night, the remains of the slowly dimming bonfire vying with the lighted beacon.

And so another correction had to be made to the charts, notably one new light to add and one old dwelling to subtract.

The operation may even be another "first" for the Canadian Coast Guard, inasmuch as not too many buildings are pulled down by ships at sea, though some are knocked down accidentally.

But that is another story altogether.

The job of maintaining the hundreds of navigational aids that dot Canada's shores is one that demands skill and teamwork from the men of the Coast Guard.

This sequence of pictures shows the crew of CCGS Thomas Carleton during a recent operation in the Bay of Fundy near Centreville, N.S., about 10 miles from Digby.

1. A replacement buoy on the deck of the Thomas Carleton gets its final markings as the ship, based at Saint John, N.B., steams across the bay toward Nova Scotia.
2. Three seamen make final preparations to drop the buoy's anchor, a 10,000-pound chunk of granite which will hold the buoy on position.
3. As the gas and whistle buoy, its radar reflector fixed firmly atop it, is placed on its position, the crew prepare to drop the granite anchor and 45 fathoms of chain (about 270 feet) overboard.

4. On the bridge, Captain Tony Croft, skipper of the Thomas Carleton watching reference marks, prepares to order the ship astern as soon as the buoy anchor is dropped.
5. Helmsman Eldon Larsen keeps the ship on course during the buoy laying operation.
6. As the ship, having dropped the replacement buoy, eases alongside the old buoy, a half-dozen crewmen grab it with pike poles and get set to hoist it aboard.
7. The heavily "bearded" buoy is aboard at last and the crew, under Bosun Bev Titus, turn their attention to taking the first lift on the chain mooring.
8. The replacement buoy rides at anchor in the background as the snarled chain and heavy anchor of the old buoy are brought aboard.



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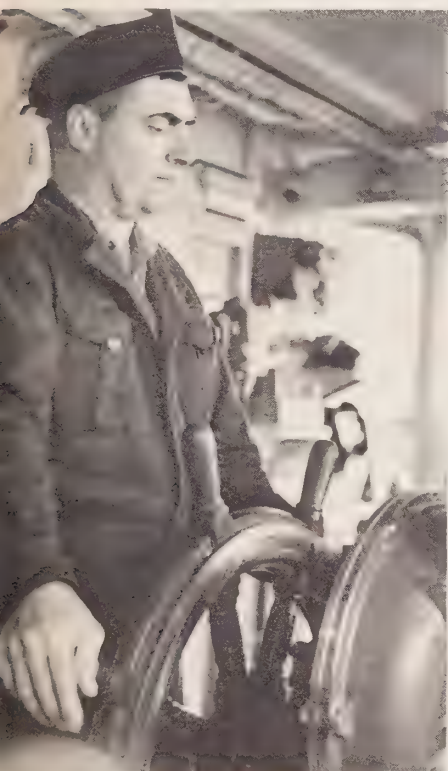
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L'entretien des centaines d'aides à la navigation qui jalonnent les côtes du Canada exige de la part des membres de la Garde côtière du Canada beaucoup d'habileté et de travail d'équipe.

Ce découpage photographique montre l'équipage du n.g.c.c. THOMAS CARLETON à l'œuvre récemment dans la baie de Fundy, près de Centreville (N.-É.), à une dizaine de milles de Digby.

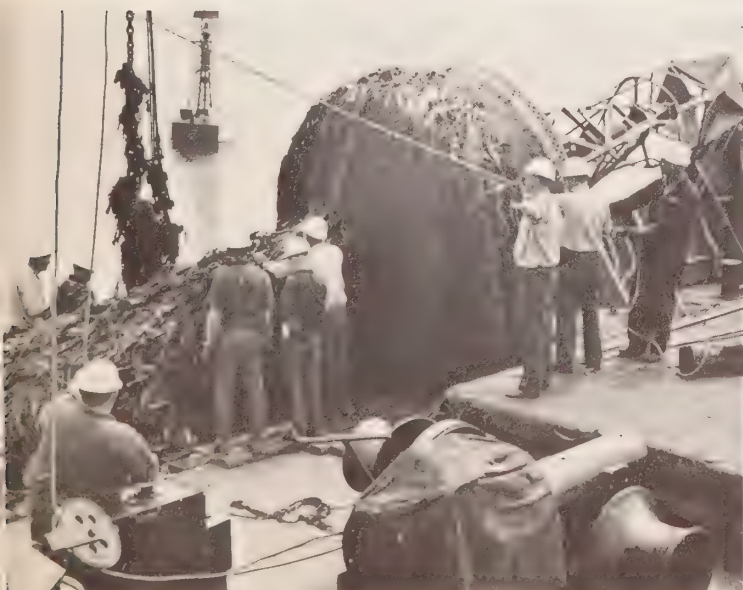
1. Une bouée de remplacement installée sur le pont du THOMAS CARLETON reçoit ses marques finales tandis que le navire, dont la base est à Saint-Jean (N.-B.), traverse la baie en direction de la Nouvelle-Écosse.
2. Trois marins procèdent aux derniers préparatifs avant de jeter l'ancre de la bouée, un morceau de granit de 10,000 livres qui maintiendra la bouée en position.
3. Le navire étant arrivé au point que devra occuper la bouée à gaz et à sifflet, surmontée d'un réflecteur radar, l'équipage s'apprête à jeter par-dessus bord l'ancre de granit et 45 brasses de chaîne (environ 270 pieds).

4. Sur la passerelle, le capitaine Tony Croft du THOMAS CARLETON surveille des repères et se prépare à ordonner la marche arrière dès que l'ancre de la bouée aura été jetée.
5. L'homme de barre Eldon Larsen maintient le navire sur sa route durant le mouillage de la bouée.
6. Au moment où le navire, après avoir mouillé la bouée de remplacement, vient longer doucement l'ancienne bouée, une demi-douzaine de membres de l'équipage la saisissent au moyen de gaffes et se préparent à la hisser à bord.
7. La bouée «chevelue» est enfin à bord et l'équipage, sous la direction du maître d'équipage Bev Titus, se prépare à exercer la première traction sur la chaîne d'ancre.
8. La bouée de remplacement est au mouillage à l'arrière-plan, alors que la chaîne emmêlée et la lourde ancre de l'ancienne bouée sont hissées à bord.



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**safety marker
replaced in bay**

**remplacement d'une bouée-balise
de sécurité dans la baie**

the canoe in commerce

by J. R. K. Main

This is the first of a Centennial series on early transportation in Canada, written especially for "The DOT" by J.R.K. Main, a former director of civil aviation. Mr. Main's book, "Voyageurs of the Air," a history of civil aviation in Canada, is being published by the Department of Transport as a Centennial project.



The canoe, particularly the birch bark canoe, is the oldest commercial conveyance used in Canada. There were other types of canoes, such as the Iroquois one, which was made of elm bark. But it was heavy, sluggish, and had none of the lithe responsiveness of the birch bark creation of the Algonquins. And some of the West Coast tribes turned out magnificent dugout canoes or pirogues—some of them 40 feet long. These could venture into rougher water than the birch canoe but, lacking its ease of handling and its weight, could not be used on a portage.

The Indian, before the white man imposed new ways upon him, was a hunter, not a trapper. And as a hunter, his patrician soul knew nothing of commerce. The canoe, therefore, was used chiefly for social occasions such as scalping parties, replenishing the tribe with squaws, friendly visits between chiefs, and so forth. But the beaver pelt lured him from his rugged Eden. He became a trapper, trading pelts for pelf, and the pliant canoe became a beast of burden.

There are a few first hand accounts of the making of these canoes:

"... they sought the largest birch trees they could find. They removed the bark in lengths for the canoe, which was three to four fathoms and a half (that is, from 18 to 27 feet in length). The breadth was about two feet in the middle and always diminished towards the two ends, falling away to

nothing. The depth was such that for a man seated it came up to his armpits.

The lining inside for strengthening it was of slats, of the length of the canoe and some four inches broad, lessening towards the ends in order that they might match together. On the inside, the canoe was lined with them completely, as well as all along it from one end to the other.

These slats were made of cedar, which is light, and which they split in as great length as they wished, and also as thin as they pleased.

They also made from the same wood half-circles to form ribs and gave them their forms in the fire.

For sewing the canoe, they took roots of fir of the thickness of the little finger and even smaller; they were very long. They split these roots into three or four parts, that is the largest ones. These split more easily than the osiers used in making baskets. They made these into packages, which they placed in the water for fear they might dry up.

Also necessary were two sticks of the length of the canoe, entirely round and of the thickness of a large cane, and four other shorter sticks of beech. All these things being ready, they took thin bark and bent and fixed it in the form the canoe should have. Then they placed the two long pieces all along and sewed them to the rim inside with these roots.

To sew, they pierced the bark with a punch of pointed bone and passed through



the hole and end of the wicker, drawing and tightening the stick as closely as they could against the bark and always enwrapping the stick with the wicker so that they were in contact with one another.

The sticks being well sewed on all along, they placed the smaller pieces of beech crosswise, one in the middle, entering at its two ends into holes made in the pieces with which the canoe is rimmed, and three others in front of it, distant a half fathom from one another, which lessened in length with the shape of the canoe. Three others also were placed backward at the same distances.

All these pieces entered at their ends into holes which were made in the pieces sewed all along the canoe, to which they were so firmly attached on both sides that the canoe could neither enlarge nor narrow.

Then were placed in position those big slats with which they lined all the interior of the canoe from top to bottom, and they were all made to touch one another. To hold them in place, they put over them those half-circles, the ends of which were brought to join on both sides below those pieces which were sewn all around on the top. They drove these in with force, and they lined all the canoe with them from one end to the other. This made the canoe stiff to such a degree that it did not yield at any point.

There were seams in it, for in order to narrow it at the two ends, they split the bark from above downwards. They then

overlapped the two edges one over the other and sewed them.

But to prevent the seams from admitting water, the women and girls chewed the gum of the fir every day until it became a salve which they applied by aid of fire all along the seams and this tightened them better than pitch.

All this being done, the canoe was finished and it was so light that a single man could carry it on his head."

For well over a century before Confederation, furs were brought into Montreal and Hudson Bay from all of Canada (apart from the Maritimes) east of the Rocky Mountains.

As the supply of beavers diminished, the trappers went further afield. Cargoes of furs are known to have reached Montreal from as far west and north as the Liard and Nahanni River basins in the Yukon. The Mackenzie, with its mighty tributaries, the Peace and the Athabasca, the watershed of the Hudson Bay and the Prairies, drained by the Saskatchewan, were all linked to the Great Lakes and the St. Lawrence by the canoe. The Canadian Pacific Railway merely put the seal of approval on what the canoe had already affirmed.

The rules of procedure, enforced by some of the traders, would not, one hopes, have been approved by D.O.T. One journal casually recounts the loss of a steersman who, as usual, was standing in the stern of a canoe working its way up a swift and

treacherous stretch of water. He lost his balance and fell in. A new steersman was hastily appointed and the crew without pause continued to fight the current—too engrossed to look back at the unfortunate ex-steersman.

However, without another simple and humble device, the stately canoe would have been of limited commercial value. That last badge of servitude, the "tump-line" (don't bother to look in the dictionary unless it is a Canadian publication) was needed to carry cargoes over a portage.

The tump-line was a cat's cradle of leather or rawhide thongs fitted over, but not tied to, the back of the engagé (carrier or porter). The bundles comprising the cargo were laid in this sling, one upon another, until the load reached well above the engagé's forehead. This called for short, stout legs, thick necks, broad shoulders and receding foreheads.

The device could be quickly disengaged—a helpful consideration in the light of the fact that the loads usually exceeded the weight of the engagé, and any slip might send him and his burden rolling over a rocky ledge. It is not recorded that one engagé ever carried another at the end of a tump-line. Nor does the stretcher seem to have been in common use.

But the canoe was not built to navigate the rough water encountered on the many large lakes. Here the York Boat, that deserves separate mention, enters the picture.

Le «Saurel» rentre au port; sa mission est accomplie

par Edouard Deslauriers

Division des Services d'information

Le «Saurel», un navire qui était jadis l'orgueil de la Garde côtière canadienne, revient au bercail, ces jours-ci, après avoir complété sa dernière mission comme brise-glace dans les eaux du fleuve Saint-Laurent. Maintenant démodé, usé, fatigué, ses ressources épuisées, le «Saurel», de guerre lasse, rentre au port, arborant fièrement le pavillon de la Garde côtière qu'on a vu battre à tous les vents sur ce vieux navire qui, pendant près de 40 ans, a bravé les intempéries dans les glaces du fleuve et du golfe Saint-Laurent, au large de Terre-Neuve et jusque dans l'Arctique.



Le «Saurel», la proue et même le pont recouverts d'une épaisse couche de glace, arrive au quai de Natashquan, en janvier 1947, avec une cargaison de 40 tonnes de vivres et d'approvisionnements pour les habitants de l'endroit. Parti de Charlottetown, Île-du-Prince-Édouard, le 30 décembre 1946, le navire devait faire son chemin dans de la glace solide d'une épaisseur de 18 pouces.

Construit aux chantiers navals de Canadian Vickers, à Montréal, en 1929, le «Saurel» a été officiellement lancé le 30 octobre de cette même année, et, dès le 13 décembre, il était affecté à l'Agence de la marine du ministère des Transports à Québec. C'est de là qu'il est parti, le 10 janvier dernier, pour entreprendre sa dernière mission de déglacage dans la section du fleuve s'étendant entre Trois-Rivières et Sorel.

Depuis quelques années, on sentait que la fin approchait pour ce vieux navire, autrefois la reine de la flotte du ministère des Transports. Les directives étaient claires: «Le «Saurel» ne doit plus s'éloigner de son port d'attache; on lui confiera des tâches moins ardues dans la section du fleuve s'étendant entre Québec et Sorel». Ses heures étaient comptées. On allait bientôt le mettre au rancart.

De nouveaux brise-glace modernes et plus puissants vont assurer la relève. Certains sont destinés à la patrouille de l'Arctique; d'autres serviront dans les Grands Lacs et le golfe Saint-Laurent. L'un d'eux, le «Louis S. St-Laurent», par exemple, est actuellement en construction aux chantiers de Canadian Vickers, à Montréal. Ce navire à trois hélices, le plus puissant de son genre au monde, sera affecté à la patrouille des eaux de l'Arctique et de l'est du Canada.

Dernier hommage au «Saurel»

Les quelque 40 marins et officiers à bord du «Saurel» font leur adieu au vieux brise-glace en lui rendant un dernier hommage: «Il a fort bien rempli sa mission, n'a jamais failli à la tâche, et l'on a raison d'être fier des services qu'il a rendus à la Garde côtière et au pays tout entier.»

Certains membres de l'équipage sont à bord du navire depuis déjà de nombreuses années. L'un d'eux, entre autres, M. Mathieu Fortin, est officier mécanicien à bord du «Saurel» depuis 1945. C'est à regret qu'il voit disparaître un navire qui, pendant autant d'années, a été pour lui un second chez-soi. «Lorsqu'on a vécu aussi longtemps à bord d'un même navire, dit-il, on ne s'en sépare pas sans ressentir un certain serrement de cœur».

M. Fortin se souvient des tâches difficiles accomplies par le «Saurel» alors qu'il accompagnait les cargos qui, à l'année longue, circulaient aux alentours de Terre-Neuve et de la Nouvelle-Écosse à l'époque où les mines de charbon de Springhill, N.-É., étaient en pleine exploitation. Il fallait frayer des voies dans des amoncellements de glace atteignant deux ou trois pieds d'épaisseur et parfois davantage.

M. Fortin raconte qu'au cours d'un de ces voyages sur la côte du Labrador, le «Saurel» a perdu une hélice alors qu'il se trouvait à plusieurs milles au nord de Goose Bay. Le navire, de peine et de misère, a réussi quand même, sa puissance étant réduite de moitié, à revenir à Halifax, en bousculant boiteusement la glace sur son passage sur une distance d'environ 800 milles. C'est tout de même un exploit assez extraordinaire. «Le «Saurel», d'une jauge brute de 11,769 tonneaux, a 212 pieds de longueur, 42 pieds de largeur et a une profondeur de 21 pieds.

On a souvent entendu les marins à bord du «Saurel» comparer leur navire à un sous-marin. M. Donat Gravel, de Québec, ancien membre de l'équipage et maintenant surintendant

régional des mécaniciens, nous explique que cette comparaison vient du fait que le «Saurel» avait la faculté de «piquer» dans la glace avec une telle facilité qu'il donnait l'impression d'un sous-marin sur le point de disparaître sous l'onde.

Le capitaine George Burdock, qui a commandé le «Saurel» pendant près de cinq ans, a conservé un riche bagage de souvenirs de ses années à bord du brise-glace. Il se souvient particulièrement de la saison 1957-1958 alors que son navire, à deux reprises, s'est fait prendre dans des amoncellements de glace au large des côtes de Terre-Neuve. En une occasion, la glace en formation autour du navire a exercé une telle pression que le brise-glace s'est vu soudain soulever au-dessus des glaces et est demeuré ainsi immobilisé pendant une dizaine de jours. C'était chose assez rare pour le «Saurel» qui, à cette époque, avait la réputation de surmonter les pires obstacles. «Il faut dire que c'était un des pires hivers que j'aie jamais connus», a commenté le capitaine Burdock, qui commande maintenant le brise-glace-câblé John Cabot. La glace, à certains endroits, pouvait atteindre de sept à huit pieds de profondeur et même davantage.

Un navire-école

Le «Saurel», ce fut plus qu'un brise-glace. On s'en est en effet servi comme navire à tout faire, comme baliseur et comme navire de ravitaillement. Mieux encore, ce fut un véritable navire d'entraînement. Nombreux sont les officiers actuels de la Garde côtière canadienne qui ont fait leur apprentissage à bord du «Saurel». Les capitaines Mercier, Blais, Burdock, Gagnon, Fournier, pour n'en nommer que quelques-uns, y ont assumé leurs premiers postes de commande. A cause de la variété des tâches qu'on lui confiait, le «Saurel» se prêtait fort bien à la formation des officiers qu'on destinait au commandement de la flotte du ministère des Transports.

En 1930, la Garde côtière n'avait à sa disposition que trois brise-glace, soit le «Saurel», le «Mikula» et le «Lady Grey». Ces deux derniers ont depuis longtemps déjà été mis à leur retraite. Le «N.B. McLean» était cependant en construction à cette époque, et, à la fin de 1930, il faisait son apparition dans le Saint-Laurent en compagnie des trois autres. Aujourd'hui, la flotte du ministère comprend, entre autres, dix-neuf brise-glace, dont certains sont plus légers et servent plutôt au balisage.

Dès sa première année de service, le «Saurel» a été dépêché à Trois-Rivières, le 3 février 1930, afin de travailler à la prévention des inondations dans le lac Saint-Pierre. Il a accompli ce travail en un temps record, puis il s'est attaqué à la glace dans le fleuve. Le 3 avril de cette même année, il avait réussi à ouvrir un chenal depuis l'entrée du lac Saint-Pierre jusqu'à Montréal. Grâce à son travail efficace, on avait réussi à prévenir les inondations entre Québec et Montréal.

Dans son rapport annuel des opérations de la marine pour l'année 1929-1930, le ministère écrit au sujet du «Saurel»: «Ses services sont extrêmement satisfaisants. Il pénètre dans les champs de glace ordinaire avec une facilité exceptionnelle.» Le rapport précise que le «Saurel», dans la journée du 3 avril 1930, a dû se frayer une voie dans une couche de glace de 20 pouces d'épaisseur s'étendant entre le quai de Verchères et celui d'Imperial Oil, à Montréal, soit sur une distance de 13 milles. Il fonçait dans cette glace à une vitesse de trois milles à l'heure.

Ainsi, dès le début de son existence, le «Saurel» se faisait signaler pour l'excellence de ses services, et l'on peut lire dans les divers rapports du ministère sur la navigation au cours des années 1930, 1931 et 1932 que sans l'intervention du «Saurel», on aurait eu à déplorer de lourdes inondations sur les terres basses en bordure du fleuve dans le secteur s'étendant entre Montréal et Québec.

Avec la disparition du «Saurel» et l'avènement du «Louis S. St-Laurent», on tourne une nouvelle page dans l'histoire de la navigation au Canada. Pour le «Saurel», c'est la fin d'une longue et fructueuse carrière; pour le «St-Laurent», c'est le début d'une aventure que nos enfants auront un jour à raconter,

THE SAUREL

CCGS Saurel, once the pride of the Canadian Coast Guard's icebreaker fleet, is being retired after nearly 40 years of yeoman service.

Built in 1929 at the shipyards of Canadian Vickers Limited in Montreal, the Saurel has worked most of her career in the same stretch of the St. Lawrence, although she has also served in the Gulf, off the coast of Newfoundland and in eastern Arctic waters.

The Saurel, which also appears in the Canadian Coast Guard Album on our back cover, is now on her last mission, conducting icebreaking operations in the St. Lawrence between Trois-Rivières and Sorel.

When the job is done, she will head for port at the Quebec marine agency where she will receive a final tribute from the officers and men of her crew.

To quote from Oliver Wendell Holmes:

*"Ay, tear her tattered ensign down!
Long has it waved on high,
And many an eye has danced to see
That banner in the sky."*



La glace, le plus redoutable ennemi de nos navires circulant dans les eaux canadiennes durant les mois d'hiver, peut parfois rendre la navigation tout à fait impossible. Dans cette photo, on voit les cordages et les treuils sur le pont du «Saurel» littéralement enchâssés dans la glace.

Planning Airports for the Future

PART II

by W. A. Ramsay

This is the second of a two-part series by Mr. Ramsay, the D.O.T.'s senior architectural adviser, based on a recent talk to the Ottawa branch of the Engineering Institute of Canada.



architect's model
Vancouver International Airport

Only a few years ago, the maximum speed limit on highways was 50 miles per hour. Highway departments had to widen the roads, smooth out the hills and curves, increase the speed limit and develop new routes to accommodate the evolution in vehicular development and the growth of its utilization.

Over the past few years, educational departments have had to build more schools to satisfy the still increasing demand for educational facilities at junior levels. Today our universities are crowded to capacity and new universities or extension colleges are under construction at cities all across the country.

Elsewhere, there has never been such a great demand for houses, high rise apartments, office buildings, shopping centres, recreational centres, factories and their products.

The reason for this growing demand, reaching into every area of our life today, is due to the increase in the rate of growth of our population and the decrease in the mortality rate. The population of Canada today by age proportion is 48.3% under 25 years, 44.1% between 25 and 65 years and 7.6% over 65 years. With the increase in population in Canada to 1976, the age proportion then, instead of shifting to the older age brackets, is estimated to be 50.2% under 25 years, 41.6% between 25 and 65 years, and 8.2% over 65 years. The growth of population is not unique to Canada, it is world wide.

Few words need to be said about the advance in technology in recent years. For example, a few years ago television reception was a novelty. Today it is accepted as commonplace to receive television programs via man-made satellites from other parts of the earth or from beyond the earth.

The same evolution which a few years ago effected highways, schools, housing and other industries is now involving the aviation industry. Being a comparatively young and modern industry, the full impact of the population explosion and technological evolution were slower in reaching it than the other industries.

The question may well be asked, why in such a young industry were facilities not planned in anticipation of a growth factor and to accommodate technological advances further into the future? In turn, this evokes the question of the nature of the problems now anticipated in the industry.

In answer to the first question, it may be said that a growth factor and technological advances in the industry were both given due consideration in the planning and construction of terminal building in Canada. To be specific, a growth period of 10 years was established, partly for economic reasons and partly to avoid over-commitment in the event that new types and methods of aircraft operation might then be introduced. It should be noted, however, that at the time that planning was completed and construction commenced, jet aircraft were not yet in operation. Allowances were made at that time to accommodate aircraft up to approximately 165-passenger capacity with bridge loading and other facilities common today.

The problems now anticipated in the aviation industry are directly related to new types of aircraft now under development. There are three types of aircraft in varying stages of development. In order of their operational introduction, the first new aircraft is not really a different type of aircraft—except for its capacity. This aircraft is an enlarged version of the DC 8. It is being enlarged to a capacity of 261 passengers and 2,500 cubic feet for cargo.

The second new type of aircraft known as a super jet or jumbo jet is being developed by the Boeing Aircraft Company and called the B-747. It will have a capacity of up to 490 passengers and 6,190 cubic feet for cargo. Like the DC 8, the super or jumbo jet may be enlarged to carry 850 or 1,000 passengers. Lockheed expects to convert its military C-5A to carry up to 840 passengers.

The third type of aircraft is known as the Supersonic Transport or SST. There are three SST's being developed, each in

a different country. A joint Anglo-French version called the Concorde is being designed to carry 140 passengers at a speed of 1,450 miles per hour or just over twice the speed of sound. A Russian version, a TU 144, is being developed to fly at 1,550 miles per hour. An American SST is being developed by Boeing to fly at 1,750 miles per hour and carry up to 350 passengers.

The problems which the first two types of aircraft will impose on terminal buildings vary mainly in degree and not in kind. With present day procedures, passengers are requested by airlines to arrive at the terminal at least 20 minutes before flight departure. Ticket counters were requested by airlines for a 10-year period to accommodate the normal spread of passenger arrival times for aircraft seating up to approximately 100 passengers. The baggage is tagged at the counter and dispatched by a mechanical conveyor to an airline baggage room, where it mixes with baggage for all outgoing flights. It then has to be sorted for dispatch to the proper aircraft.

Now, with aircraft seating from 250 to 461 or more passengers, the foregoing procedures will cause delays in departure. The air traveller is not likely to favor the suggestion that he arrive at the terminal earlier to avoid congestion at the ticket counter, only to have a longer wait before departure. There is no unoccupied ticket counter to permit airlines to expand, so new procedures must be developed to accommodate the increased number of passengers per flight.

In addition to carrying a much greater number of passengers, the 250-seat DC 8 and the 461-seat B-747 have other new characteristics. They have a much greater carrying capacity. The B-747, for example, is expected to operate at a profit by carrying a full cargo load in its hold, with few if any seats occupied. To expedite loading and unloading these aircraft, the manufacturers have developed them to utilize containers to package both passenger baggage and cargo. To make maximum use of such containers, passengers' baggage should go directly into the container for his aircraft, with the minimum of handling and re-sorting. The baggage check which the passengers receive

should permit easy identification of their baggage at destination without having to search among 300 to 500 bags.

With the greatly-increased cargo-carrying capability of these aircraft, new problems arise concerning the storage of spare cargo/baggage containers, their handling procedures and their travel distance from loading point to aircraft.

One modified procedure which would alleviate the problem of checking-in would be to divide the ticket counters on a modular basis and allot a certain number of modules for each flight for baggage check-in only. The tickets could be lifted after the passenger takes his seat on board the aircraft.

With departure rooms in existing terminal buildings established to accommodate 100 to 150 passengers, they will obviously have to be enlarged (or more than one utilized) to accommodate the 300-to-461-seat aircraft. Probably more critical than the departure rooms are the access corridors to these rooms, especially where both public and passengers circulate. They will also need to be enlarged and additional washroom and other facilities added. Additional curb space and car parking facilities will also be required.

Partly for the comfort and convenience of the passengers, but more particularly to expedite their en-planing and de-planing, and to permit uninterrupted and faster servicing of the aircraft by keeping passengers off the apron, loading bridges should be installed for the large new type of aircraft. Provision for bridges was made in the design of many Canadian terminals.

Inspection service facilities were limited at most to four simultaneous arrivals of the 100-to-150-passenger aircraft. Here

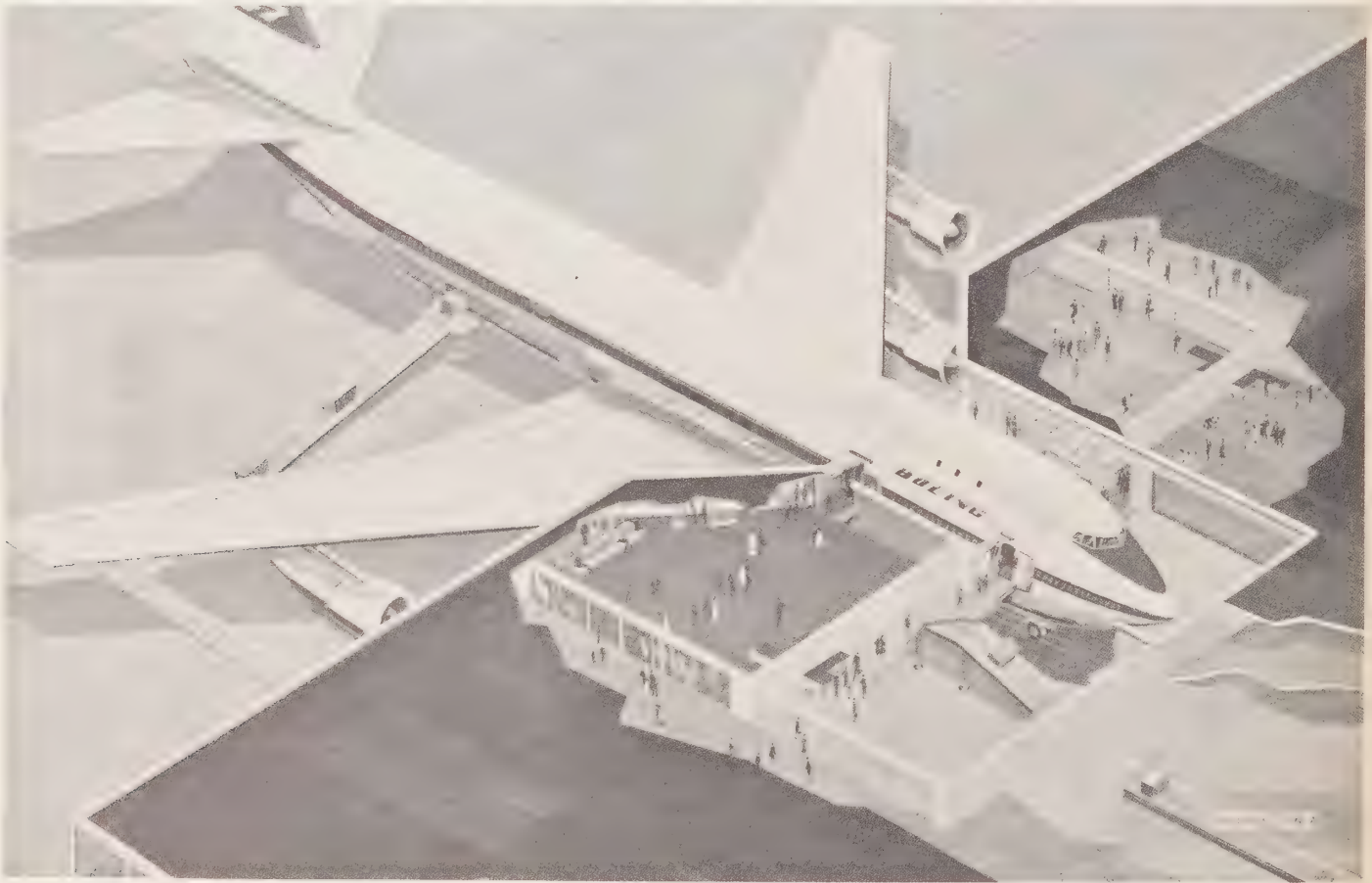
again, two channels would accommodate one large aircraft but it would be more logical to modify procedures and modify and enlarge the facilities, especially the baggage handling, to match the containerized types of operation.

The weight of the B-747 is just under 350 tons (Note: Airlines and manufacturers are already discussing the extended version of 850 to 1,000 seats at weights of up to 750 tons.) when loaded. Some airlines are considering taxiing it nose up to the terminal and then pushing it out when loaded. This method of operation in the Canadian winter climate could be a problem, but this may be overcome by installing radiant heating in the path of the tug to push the aircraft.

Both the 260-seat DC 8 and the B-747 are being manufactured with an auxiliary motor on board to generate electric power for lighting, air conditioning, etc., to eliminate ground power connections to the terminal. Fuelling these aircraft, however, will require modifications to existing fuelling systems, if flights are not to be delayed. Sewage disposal from the aircraft will require additional or larger tank trucks.

All of the proposed building modifications discussed here may be classed as improvisations to accommodate the next plateau of aircraft in limited numbers simultaneously. The limiting number at each terminal is a matter for careful study, already in progress. New terminals should provide passengers with direct access from car through waiting room to aircraft and the reverse.

The third type of aircraft now being developed, the supersonic or SST, although not carrying as many passengers and



This sketch from a Boeing brochure shows one method of facilitating the loading and unloading of passengers and baggage at the airport of the future.

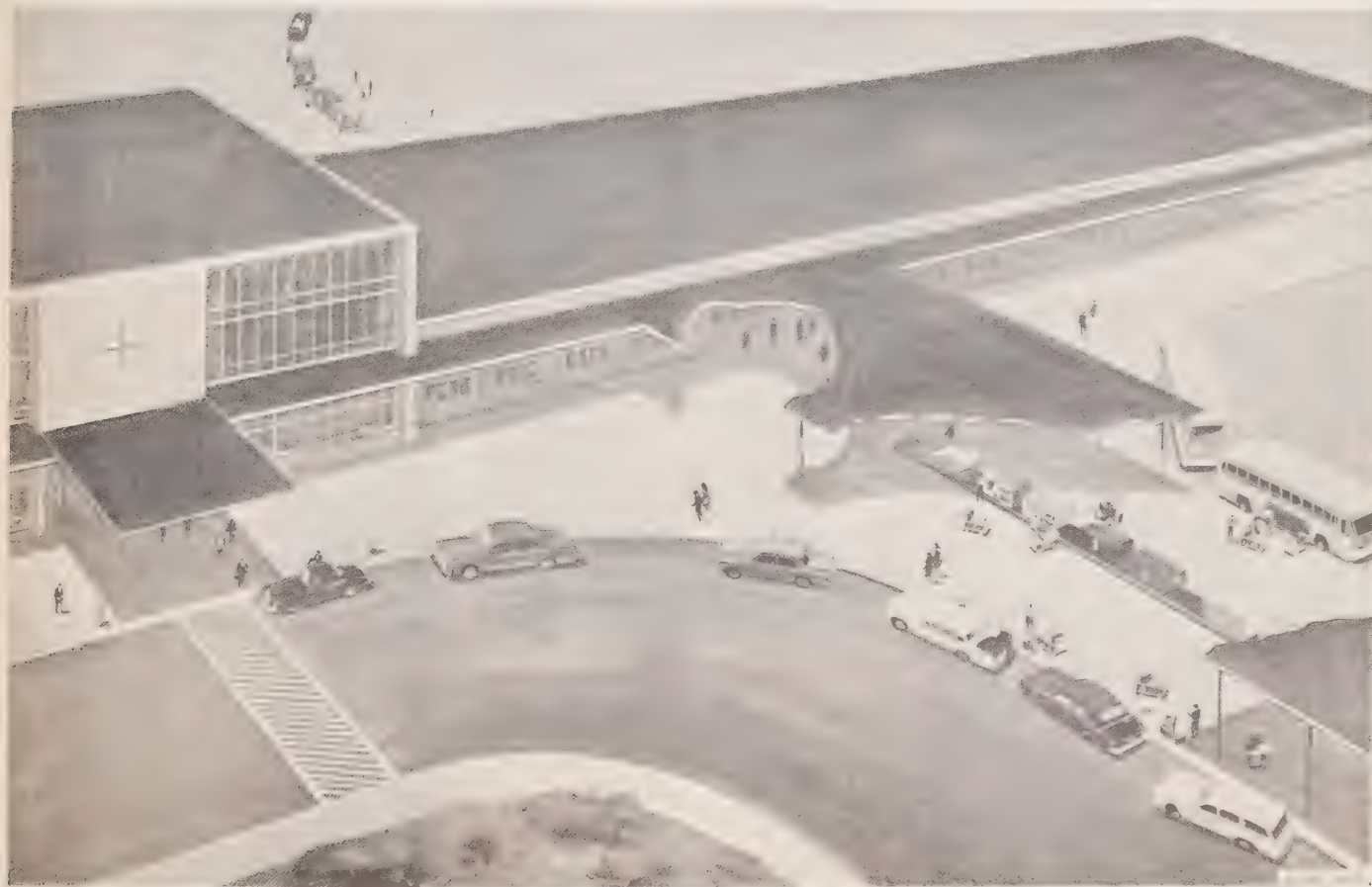
with the attendant problems of lesser magnitude, will have many other problems. The gate positions or aircraft parking circles were established as a maximum of 220 feet in diameter at Canadian terminals. The Concorde has a length of 184 feet and a wing span of 84 feet and could fit one of the gates in nosed-in aspect. The Boeing SST is expected to measure 306 feet in length with a wing span of 180 feet, wings open, and 106 feet, wings closed. Parked parallel to the face of the terminal, it would require two gate positions.

At supersonic speeds of 1,600 to 1,700 miles per hour, the outer skin of the aircraft is subjected to such friction from the air, that the surface temperature rises to 425 degrees Fahrenheit even at altitudes where the air temperature is around -50 degrees F. In order to maintain an inside cabin temperature of 70 degrees, the whole body of the aircraft must be insulated and have a piping system to circulate a coolant at -20 degrees. If the SST were to make a direct landing, it has been calculated that the body would be too hot for service personnel to touch. By slow descent, however, this problem would be minimized or eliminated, and in any case the passengers would not be exposed to the surfaces because of the loading bridge.

In summary then, the main problems which the super jets will impose on terminal buildings relate to accessibility to the airport, car parking space, curb space, check-in procedures, baggage handling, circulation to the gate position, the size of the departure rooms, and the adequacy of service facilities. All must be enlarged or improved to meet the demand of much larger simultaneous passenger arrivals or departures, permit

new operational procedures, and to increase capacities beyond the 10-year growth period of present terminals.

There are many other problems, both anticipated and unknown, which will arise in terminals with new types of aircraft to come into operation in the next few years, but airport planners are confident that, with new methods, procedures and planning, the problems will be resolved in a manner compatible to the aircraft.



The introduction of larger aircraft may lead to such new concepts as this plan for curbside baggage handling.

RETIREMENTS

R. Spouse

Raymond Spouse, a D.O.T. employee who served 49 years in the civil service including 24 years on a remote Vancouver Island lightstation, has retired in Victoria.

Yard superintendent at the Department's marine depot in Victoria at the time of his retirement, Ray was born in Wallsend, England on July 7, 1902 and moved with his family to the British Columbia capital when he was about nine years old.

Starting work as a mess boy aboard the old Fisheries patrol vessel "Malaspina" shortly after his 15th birthday, Ray transferred to the Government's marine radio division after a year at sea.

Near the end of his five-year apprenticeship in the division's wireless workshop, the young radio operator was sent to Estevan Point off the west coast of Vancouver Island, where the radio and light station were being rebuilt.

Ray was told that his assignment at the light station would last 10 days. Instead he spent the next 24 years there, a tour of duty that he describes today as "interesting, but not exciting".

Ray ruefully recalls that the station's most spectacular event (which occurred June 20, 1942 when a Japanese ship shelled the Estevan Point installation) took place while he was on leave in Vancouver.

In June 1945, Ray was transferred to the Victoria depot as a marine signals mechanic and later was promoted to maintenance supervisor.

He completed his long service on Jan. 5, 1967 and retired after he and his wife Mary were presented with several gifts and feted by fellow employees at the depot, including L. E. Slaght, district marine agent.



Mr. Spouse and L. E. Slaght

R. C. Peddle

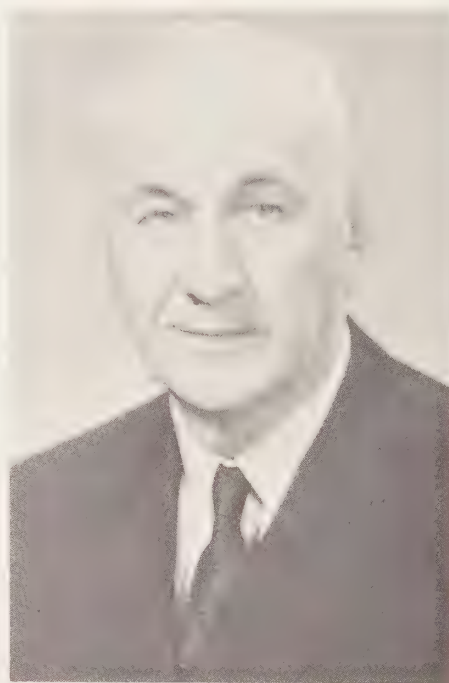
Roland Chesley Peddle, inspector in charge of radio regulations at St. John's, retired Jan. 31 after more than 47 years of government service in Newfoundland.

Mr. Peddle began his career in the Government of Newfoundland with the Department of Posts and Telegraphs in 1919 as a postmaster and telegrapher.

In 1943, he was moved to the engineering branch and on April 1, 1949, he joined the telecommunications and electronics branch of the Department of Transport as an inspector of radio regulations.

Eight years later, he was promoted to inspector in charge of the St. John's office, a position he held until his retirement.

At a gathering held in his honor, Mr. Peddle was presented with a piece of luggage from his co-workers by C. M. Williams of Moncton, regional superintendent of radio regulations.



R. C. Peddle

R. C. Smith

The Winnipeg Flying Club was the scene last Dec. 28 of a retirement party for R. C. Smith, inspector of airworthiness for the Winnipeg region.

With his retirement, Mr. Smith completes almost 40 years of activity in both civil and military aviation.

Mr. Smith's early life was spent in London, Ont., where he was one of the first holders of the D.O.T.'s "B" and "D" air engineer's licences.

He was associated with London Air Transport and the London Flying Club as an air engineer before joining Fleet Aircraft at Fort Erie, Ont., as chief inspector of new aircraft construction.

In 1937, he was appointed assistant superintendent of the Canada Car and Foundry Company in Fort William, Ont., and held this position until the outbreak of the Second World War when he joined the RCAF.

During the war, Mr. Smith attained the rank of wing commander and became commanding officer of No. 15 Aeronautical Inspection District in Winnipeg.

He joined the Department of Transport in 1947 as resident inspector at A. V. Roe Canada Limited where he was in charge of airworthiness surveillance for the Avro C-102, the first commercial jet aircraft built in North America.

When work on the jetliner stopped in 1952, Mr. Smith was transferred to the Winnipeg region where he became regional airworthiness inspector.

Miss E. Clarke

Miss Emma Clarke has retired from the Department of Transport after serving almost 20 years in the frequency bureau of the Radio Regulations Division in Ottawa.

Born in Fitzroy Harbour, Ont., Miss Clarke served previously with the Canadian Army from June 1942 until March 1947 before joining D.O.T. where she was assigned to the General Engineering Branch.

In 1952, Miss Clarke was transferred to radio frequency licences and later to the radio frequency bureau.

Miss Clarke, who officially retired last January 16, was congratulated by A. G. E. Argue, superintendent of authorization and enforcement. Gifts that included a pearl necklace, matching earrings and a French purse were presented to her by Miss Evelyn Smirle on behalf of her many friends in the division.

L. J. Podd

L. J. (Lance) Podd, an electrician at Lakehead Airport, has retired, ending a 28-year career with the Department that took him to posts in Ontario, Manitoba and Saskatchewan.

Eighty-five friends, including guests from the Lakehead area, Winnipeg and Churchill, gathered to honor Mr. Podd at a dinner held last October in the Royal Edward Hotel, Fort William.

A highlight of the evening was the presentation of a reclining chair to Mr. Podd by R. E. St. John, regional supervisor of airports at Winnipeg.

Master of ceremonies was Walter Heikinen, airport manager at the Lakehead air terminal.

C. P. Titus

The chief cook aboard CCGS "Thomas Carleton" has hung up his apron for the last time.

Clarence P. Titus, whose retirement took effect with the new year, first signed on aboard CCGS "Dollard." He was transferred to the Thomas Carleton in September 1960 where he served as chief cook under five captains.

The genial cook said he always found the ships' crews to be co-operative and highly appreciative of the pastries and bread he liked to make best.

His favorite pastime, however, was trying out new recipes and the proof of the pudding, according to Mr. Titus, lay in the fact that "they always asked for more."

Mr. Titus, who received congratulations on his retirement from Captain E. O. Ormsby, district marine agent at Saint John, now lives in Westport, N.S., with his wife.



C. P. Titus

C. E. Bolduc

Clarence Edward ("Pop") Bolduc, as he is known on the airways, has retired after serving 26 years in air traffic control.

Mr. Bolduc served as a radio operator with the merchant marine and American Airlines, before joining air traffic control services in Montreal in 1940.

In 1945, he transferred to the Windsor control tower as senior control officer and served there until his retirement in 1966.

At a farewell gathering at the Windsor Flying Club, Mr. Bolduc was presented with a gift from his friends and associates by F. E. Dorey, regional supervisor, air traffic control.

The well-known controller says he plans to spend his retirement working on his lifelong hobby, amateur radio.



C. E. "Pop" Bolduc

A. C. Waldie

A. C. Waldie, divisional supervisor of the Great Lakes division of the Steamship Inspection Service, has retired after 21 years service.

A lifelong love of ships and the sea remained with Mr. Waldie from the day he began his apprenticeship in England in 1916 until he retired—with the exception of a year's service as an air frame mechanic with the Royal Air Force in France during the First World War.

During the Second World War, Mr. Waldie served at sea, was one of the participants in the First Convoy Conference held in Halifax and joined the British Admiralty Technical Mission in Montreal in 1943.

In 1945, he joined the staff of the Steamship Inspection Service, Toronto. He was promoted to senior steamship inspector in 1954 and promoted to his present position in April, 1958.



Mr. and Mrs. A. C. Waldie

DOT Wins Honors For Fire Prevention

Ottawa—Seven Department of Transport installations have won honors in the 1966 annual Government of Canada Fire Prevention Contest.

The seven include Edmonton International Airport, the Canadian Coast Guard College, Vancouver International Airport, Halifax International Airport, Torbay Airport, Moncton Airport and Montreal International Airport.

They placed eighth, 10th, 11th, 12th, 13th, 14th and 17th, respectively, among the 20 winners in the contest. There were 209 entries.

Overall winner in the national contest was Westminster Hospital in London, Ont.

The Government of Canada competition followed the annual Air Services Fire Prevention Contest in which Edmonton International Airport took top honors after scoring highest among 46 entries.

(The contest is judged by the Emergency Services and Requirements Section of the Airports and Field Operations Branch. All entries are divided into three classes for airports according to size and one for miscellaneous sites.)

Winners of the four classes included:

Class A

- (1) Edmonton International Airport
- (2) Vancouver International Airport
- (3) Canadian Coast Guard College

Class B

- (1) Sault Ste. Marie Airport
- (2) Quebec Airport
- (3) Fort St. John Airport

Class C

- (1) Port Hardy Airport
- (2) Fort McMurray Airport
- (3) Yarmouth Airport

Class D

- (1) Graham Aeradio Station
- (2) Estevan Point Surface Weather Station
- (3) Spring Island Loran Station

CROSS CANADA DATELINE



GERRY CASSAN WINS AGAIN—A few months ago, "The DOT" recalled the exploits of a young Canadian speedskating champion, Gerard Cassan, son of Robert Cassan, a member of the maintenance staff at Ottawa International Airport. In February, 12-year-old Gerry was awarded the Jean-Charles Daoust trophy as the best all-round French-speaking amateur athlete in the Ottawa-Hull area. A few days later, Gerry set a new record in the Juvenile Boys' 440 in the Ontario Open Speedskating Championships held in Ottawa. His time was 46.3 seconds. He also won the 220. Here, Gerry is shown with his father and mother.

NOUVEAU TRIOMPHE DU JEUNE CASSAN

—Il y a quelques mois, "The DOT" rappelait les exploits du jeune Gérard Cassan, qui, à l'âge de 11 ans, était déjà acclamé comme champion canadien du patinage de vitesse dans la classe midget. Gérard, fils de M. Robert Cassan, membre du personnel chargé de l'entretien à l'aérogare d'Uplands, vient maintenant d'ajouter un nouveau trophée à sa collection. Au cours du gala sportif organisé par le journal "Le Droit" en février dernier, Gérard a été proclamé le meilleur athlète amateur d'expression française de la région Ottawa-Hull. On lui a alors décerné le trophée Jean-Charles Daoust. Quelques jours plus tard, Gérard, maintenant dans la classe des juvéniles, a établi un record aux épreuves ouvertes de championnat de l'Ontario en parcourant les 440 verges en 46.3 secondes. Il remportait également les honneurs dans la course de 220 verges. Gérard est photographié ici en compagnie de son père et de sa mère.

Promotion

Moncton—A former Ottawa man has assumed his new appointment here as regional engineering supervisor of the Telecommunications and Electronics branch of the D.O.T. for the Moncton air services region.

Lloyd Grant Manery, a graduate of Queen's University, Kingston, and a member of the Association of Professional Engineers of Ontario, was formerly radar maintenance engineer and engineer in charge of manuals at headquarters prior to his appointment.

Coffee Can Lid Wins \$30 Suggestion Award

Ottawa—The plastic lid from a can of coffee has won a \$30 suggestion award for A. E. Moore, an aircraft mechanic at headquarters.

Mr. Moore found that the lid, given to him by a steward aboard CCGS "D'Iberville" while he was working on the ship's helicopter, was useful for saving partly-used quarts of oil.

"I found that sometimes it was necessary to open an oil can for very little oil," said Mr. Moore. "The bulk of the oil would eventually be thrown away because of the difficulty of covering it properly."

"With these plastic covers, you can remove a spoonful or a cupful of oil, replace the cover and the remaining oil is safe until it's needed again," he said.

Another \$30 suggestion award winner was E. G. Beagan of RR 1, Nobel, Ont., a clerk with the district marine agency at Parry Sound, Ont.

Mr. Beagan suggested that the Department have all small boats at its marine agencies painted a standard color of red and white to conform with the colors of the Canadian Coast Guard.

In adopting the suggestion, the Department decided to standardize small craft colors by painting the hulls white with red trim (the reverse of the red hulls and white trim of the Coast Guard) to indicate a close relationship, yet not confuse the public into thinking that all red and white D.O.T. vessels are rescue craft.

Also \$30 richer after a modification to a stock card was found to be a worthwhile improvement in work methods, is D. B. Simmonds, a clerk at the district marine agency in Charlottetown.

A \$25 suggestion award was presented to J. R. Gareau, a welder with the Department's marine agency at Prescott, Ont., for suggesting a simplified closure for battery chamber covers on buoys.

Mr. Gareau said his suggestion would make changing the batteries in buoys much less complicated, particularly in choppy waters.

A \$15 award went to K. L. Leek, officer in charge of the upper air station at Stephenville, Nfld., for suggesting that a thermometer holder be used at weather stations where some thermometers are temporarily out of service because of extremely low temperatures.

Mr. Leek said a holder or rack would provide a safe place to store the instruments so that they would not be broken accidentally.

Safety Award

Toronto—Captain Howard G. Bould, the Coast Guard Rescue Officer at Trenton, Ont., has won the 1966 Award of Merit sponsored by the Canadian Boating Federation.

The award was presented to Capt. Bould at the Canadian Boat Show in Toronto last Feb. 7.

The award carries the citation: "For the promotion of safety beyond the call of duty and his devotion to the preservation of life and safer boating."

D. D. G. Keddie Is Named Executive Assistant Air

Douglas D. G. (Doug) Keddie, 56, has been appointed Executive Assistant to the Assistant Deputy Minister, Air.

Mr. Keddie, Emergency Measures Co-ordinator since he joined D.O.T. in 1961, replaces Henri Gourdeau, who is now Canada's representative on the council of the International Civil Aviation Organization.

A native of Ottawa and a graduate of Royal Military College, Kingston, Mr. Keddie joined the Royal Canadian Air Force in 1931 and transferred the following year to the Royal Air Force, where he attained the rank of Group Captain.

During his air force career he served in a number of posts including that of R.A.F. director on the staff of the Naval War College at Greenwich, England, and chief British intelligence officer on the staff of the Supreme Allied Commander, Europe.

Mr. Keddie retired from the air force in 1957 to join Canada's civil defence organization and later became chief instructor and second in command of the Civil Defence College at Arnprior before joining the Department of Transport.

Nouvel adjoint exécutif aux Services de l'Air

M. Douglas Donald Gould Keddie, ci-devant coordonnateur des mesures d'urgence au ministère des Transports, vient d'assumer les fonctions d'adjoint exécutif au sous-ministre adjoint pour l'Air.



D. D. G. Keddie

Il succède à M. Henri Gourdeau qui représente maintenant le Canada au conseil de l'Organisation de l'aviation civile internationale.

Natif d'Ottawa, M. Keddie est un diplômé du Collège militaire royal de Kingston. En 1931, il s'enrôlait dans l'ARC pour passer un an plus tard au service de la Royal Air Force.

Au cours de sa carrière dans l'aviation, il s'est vu confier divers postes importants, dont celui, entre autres, de directeur de la R.A.F. auprès du personnel du Naval War College à Greenwich, Angleterre. Après la guerre, il a également représenté le service de renseignements britannique auprès du Commandement suprême allié en Europe.

M. Keddie s'est retiré de l'aviation en 1957 pour s'occuper de l'organisation de la défense civile au Canada. Il est devenu instructeur en chef et adjoint au directeur du Collège de la défense civile à Arnprior. En 1961, il passait au ministère des Transports.



Dr. D. P. McIntyre, left, Met's chief of research and training, is shown at a recent reception held in Tokyo at the home of Japanese Prime Minister Sato. With Dr. McIntyre are Dr. G. Benton, research director of the United States' Environmental Science Services Administration, and Mrs. Benton. Dr. McIntyre was in Japan as a Canadian delegate to the 11th Pacific Science Congress.



CCGS Saurel, once the pride of the Canadian Coast Guard fleet, is about to be retired after nearly 40 years of faithful service. Built in 1929, the "Saurel" is based at the Quebec marine agency of the Department of Transport. Over the years, it has conducted its icebreaking operations in the St. Lawrence, in the Gulf of St. Lawrence, off the coast of Newfoundland and in Arctic waters.

CCGS "SAUREL"

LENGTH: 212 feet
BREADTH: 42 feet
DRAFT: 14 feet, 2½ inches
POWER: Steam, 3,000 I.H.P.
GROSS TONNAGE: 1,176

Le *n.g.c.c. Saurel*, jadis l'orgueil de la Garde côtière canadienne, est sur le point d'être mis à sa retraite après près de 40 ans de service dans les glaces du fleuve et du golfe Saint-Laurent, au large de Terre-Neuve et jusque dans l'Arctique. Son port d'attache se situe à l'Agence de la marine de Québec. Le brise-glace a été construit à Montréal en 1929.

LE N.G.C.C. «SAUREL»

LONGUEUR: 212 pieds
LARGEUR: 42 pieds
TIRANT D'EAU: 14 pieds 2½ pounces
PUISSANCE: vapeur, 3,000 cvi
JAUGE BRUTE: 1,176 tonneaux

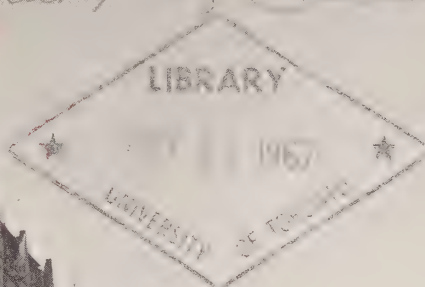
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MAY-JUNE 1967
MAI-JUIN 1967

Transportation



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COVER

The headquarters of the Department of Transport marine agency in Quebec City, which stands beneath the towering Chateau Frontenac Hotel, has been declared an historic site by the Historic Sites Commission of Quebec. A framed citation inside the building declares: "In 1746, Louis XV, King of France, took possession of this area of ground in order to establish a new shipyard for the building of his vessels. Here stood the first customs house erected by the British government after the cession."

FRONTISPICE

Ce vieil immeuble sis au pied de la falaise, à l'ombre du Château Frontenac, dans la vieille Capitale, loge présentement les services administratifs de l'Agence de la marine du ministère des Transports. Construit en 1820, l'édifice servait au début de manège militaire. Des voûtes souterraines avaient été aménagées tout près pour l'entreposage des munitions. Sous le Régime français, un chantier naval se trouvait sur cet emplacement. Une inscription encadrée à l'intérieur de l'immeuble se lit ainsi: «Le roi Louis XV, en 1746, prit possession de cet emplacement afin d'y établir un nouveau chantier de construction pour ses vaisseaux. Le gouvernement anglais y établit son premier bureau des douanes après le changement de régime.» La Commission des lieux historiques de la province de Québec se propose de conserver l'immeuble intact pour la postérité.

Editor

Bryan Goodyer

Rédacteur français

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THE DOT is a Department of Transport staff magazine published under the authority of the Minister, Hon. J. W. Pickersgill, by the Information Service Division.

«THE DOT» est la revue des employés du ministère des Transports publiée avec l'autorisation du ministre, l'honorable J. W. Pickersgill, par la Division des services de l'information.

a new ALBUM

Toronto International Airport appears for the first time on the back cover of this issue of "The DOT" in keeping with a continuing effort to have the magazine accurately reflect the many activities of the Department of Transport. The ships of the D.O.T. fleet, which have been appearing regularly in the Canadian Coast Guard Album, will continue to be featured in alternate issues of the magazine.

The Editors

un nouvel ALBUM

Une photo de l'aérogare internationale de Toronto est reproduite dans l'ALBUM de couverture du présent numéro. Il s'agit d'une innovation qui nous permettra de faire mieux connaître les divers services du ministère des Transports. D'autres photos des navires de la Garde côtière paraîtront dans des numéros subséquents.

La rédaction



FROM THE DEPUTY MINISTER

This issue contains a story on one of the rarities in the Department, a female meteorological technician.

Leaving aside the enormous and invaluable help which is provided at the clerical, stenographic and secretarial level, the number of women occupying administrative or technical positions within the Department is not very large. I do not believe that this situation results from any fault or prejudice on the part of the Department. Certainly at the senior level, we admire and respect all their attributes, values and abilities; and hold no prejudice against their working capability. Admittedly some of the positions in the Department, for example where heavy physical work is involved or where there are isolated postings, are obviously unsuitable at least within the present Canadian social context. On the other hand, in a large area of administrative, technical, scientific and professional work, women can usefully be involved.

I hope and expect that as time passes and as a result of the applications which they themselves may make, women will perform a larger role in the Department in those areas of employment where as yet they are relatively few in number.

LE MOT DU SOUS-MINISTRE

La présente livraison renferme un article sur une employée du Ministère qui fait figure d'oiseau rare, la technicienne en météorologie.

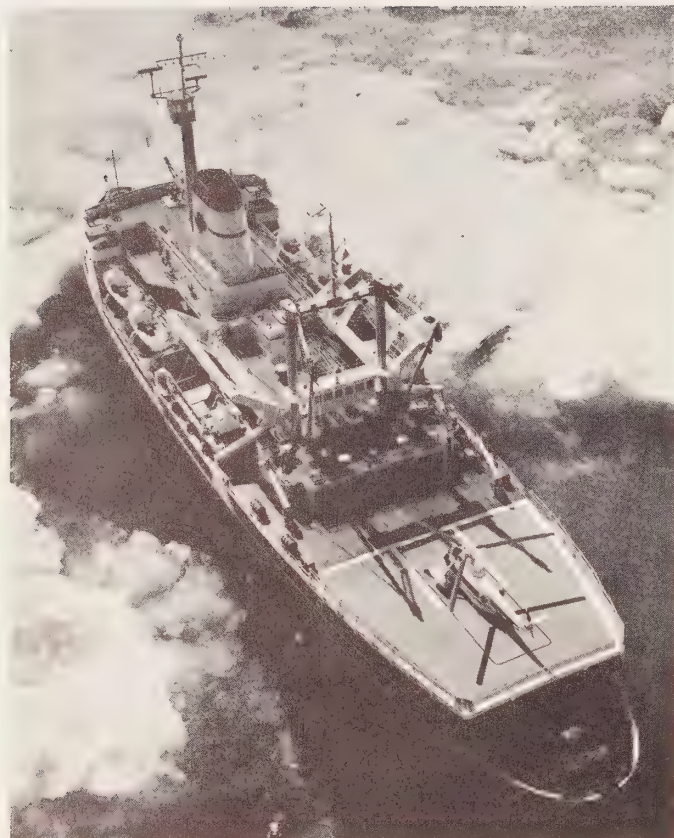
Si on fait abstraction des commis, sténographes et secrétaires qui rendent de nombreux et précieux services, le nombre des employées du Ministère qui occupent des postes de nature administrative ou technique n'est pas très élevé. Je ne crois pas que cela soit attribuable au fait que le Ministère ne s'en préoccupe pas ou qu'il soit imbu de certains préjugés dans ce domaine. Il n'y a aucun doute qu'aux échelons supérieurs nous admirons et respectons leurs qualités, leurs aptitudes et leur compétence, et que nous ne nourrissons aucun préjugé pour ce qui est de leur aptitude au travail. Il est évident que certains postes du Ministère qui comportent par exemple un gros effort physique ou l'affectation dans les endroits isolés, ne conviennent absolument pas aux fonctionnaires du sexe féminin, du moins dans le contexte social actuel du Canada. Par contre, celles-ci peuvent rendre de grands services dans le vaste secteur des postes administratifs, techniques, scientifiques et professionnels.

J'espère et je souhaite qu'éventuellement et à la suite des demandes d'emploi qu'il leur est loisible de présenter, les fonctionnaires féminins du Ministère seront en mesure de jouer un plus grand rôle au sein des secteurs d'emploi où elles sont encore relativement peu nombreuses.

J. R. Baldwin

d.o.t. takes command in expo's 'little sea'

by Edouard Deslauriers
Information Services Division



AN ICEBREAKER IN ARCTIC WATERS?—Although this picture looks at first glance like a helicopter's eye view of a Coast Guard icebreaker battling its way through heavy Arctic ice, it's actually a closeup of a 7½-foot model which visitors to Expo 67 will see at work in an artificial lake developed a few yards from the Canadian Pavilion. (Department of Transport photo)

UN BRISE-GLACE DANS LES EAUX DE L'ARCTIQUE?—Pas du tout. . . Il s'agit d'un modèle de brise-glace que les visiteurs de l'Expo 67 ont l'occasion de voir à l'oeuvre dans un lac artificiel aménagé à quelques pas du Pavillon canadien. M. Philippe Demeules, de Sorel, P.Q., a construit ce modèle, selon une échelle d'un quart de pouce au pied, en s'inspirant des plans et devis du n.g.c.c. "Louis S. St-Laurent" actuellement en construction aux chantiers navals de Canadian Vickers, à Montréal. Cette photo a été prise lorsque le modèle, téléguidé du rivage par radio, a été mis à l'essai dans une piscine encore recouverte de glace. (Photo du ministère des Transports.)

With a view to illustrating the vital role played by the Canadian Coast Guard in the economic and industrial expansion of Canada, the Department of Transport has set up an exhibit which constitutes an unusual attraction for the thousands of visitors to Expo 67.

The exhibit, which features scale models of the icebreakers of the Canadian Coast Guard, takes place a few yards from the Canadian Pavilion in a 200-foot by 100-foot lake known as "The Little Sea."

The lake is partially covered by "ice" created out of styrofoam "cakes" coated with a substance which gives them the appearance of a snow-covered icefield.

Three ship models, controlled from a tower on the edge of the lake, "navigate" it, pushing aside the styrofoam in somewhat the same fashion as the icebreakers that force their way through the waters of the Arctic and other waterways where their services are required to open up lanes for shipping.

The models are all built on a scale of one-quarter of an inch to a foot. They are the work of Philippe Demeules of Sorel, Que., a craftsman recognized as Canada's master model maker.

One of the three Expo models represents an ore carrier. It is 15 1/2 feet long and weighs 1,100 lbs.

It is escorted by a 7 1/2-foot model of an icebreaker weighing approximately 800 pounds.

The third, a lighter "icebreaker," is used as a supply and buoy-laying vessel.

Its main function in the Expo lake is to deliver supplies to a lighthouse—another of Mr. Demeules' models—on the opposite shore.

The ship, approximately five feet long and weighing 200 pounds, stops en route to lay and pick up buoys using radio-operated derricks and winches.

The model icebreaker is called the *Louis S. St-Laurent*, after the icebreaker of the same name launched last Dec. 3 as the most powerful non-nuclear icebreaker in the world.

In order to build the model, Mr. Demeules used the same specifications for the vessel as those used by Canadian Vickers Limited of Montreal, which is building the *St-Laurent*.

Like the one on which it is modelled, the *Louis S. St-Laurent* built by Mr. Demeules is equipped with three screws. An engine aft operates the rudder while another in the engine room operates the screws. A rheostat connected to the engine is used to increase or reduce the speed.

The servo-motor, the main unit used for remote control by radio, is located in the forward part of the ship. There are about 800 feet of electric wire inside the hull and a battery ensures operation of the whole mechanism for a continuous period of four hours.

As the shows last 25 minutes each hour, the battery is re-charged every night.

The lighter icebreaking supply and buoy-laying vessel bears the name of a former master in the then Department of Marine and Fisheries, Joseph Bernier, famed for his Arctic explorations at the turn of the century.

The *Joseph Bernier*, like the *Louis S. St-Laurent*, is a perfect model. There was only one so-called "fault" which surprised the builder when the model was tested.

Mr. Demeules found that it travelled too fast even through a layer of real ice, so a device was added to the engine to reduce its speed.

The ore carrier resembles in detail any ship of the type now operating in Canadian waters. Because it weighs a 1/2 ton, it is operated by engines which are more powerful than those used in the other two models. The blades of its propeller are moveable, thus permitting adjustment of pitch and even stopping the ship with the engines still operating.

The lighthouse located on the other side of the lake is modelled on the Prince Shoal lightstation in the St. Lawrence River at the mouth of the Saguenay.

Built, as are the vessels, with corrosion-resistant materials, the lighthouse is equipped with a davit and boat, lights and revolving radar antennas and also with ladders, guard rails windows, and a helicopter.

The hulls of the ships are made of fibreglass while the other principal materials used in the construction of the models are zinc and brass.

In the evening, the small electric lights arranged on the decks of the vessels put realism into the demonstration and add glamor to the show.

The entire demonstration is conducted by an operator in the control tower using a console equipped with a series of switches which transmit direction signals to the servo-motor of each ship, using a radio control system designed by Ernest Apps of Toronto.

Mr. Demeules took almost a year and a half to build his models, working alone in the shop in the basement of his home in Sorel.

His son, Yvon, who is a mechanical draftsman, prepared the plans which were used for the construction of the driving parts and which showed their location within each model.

With the same creative spirit of his father, Yvon also built several items such as the helicopters, lifeboats, derricks and other equipment of that nature on board the vessels.

Born in Laprairie, Que., Philippe Demeules was initiated at a young age into the trade which became his livelihood. While he was still at elementary school, he showed a marked taste for things mechanical and artistic.

At the age of 16, he left school to become a draftsman but returned to complete his education when the Ecole des Beaux Arts opened in Montreal in 1920.

After eight months of studies, he returned to the drafting board and worked for a number of firms before obtaining his

first contract for a ship model in 1952 from the Department of Transport.

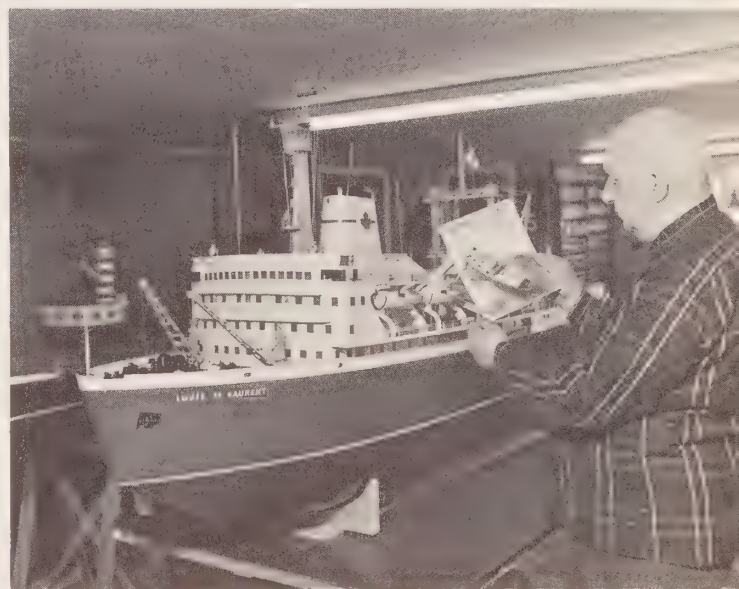
His model of the icebreaker *d'Iberville* launched him into his career as a model maker. He was then 48 years old.

Since then, Philippe Demeules has been working on his own but his services are in such demand that it is impossible for him to accept all the contracts offered to him.

A few months ago, he built a scale model of the new weather-ship *Vancouver*, which was presented to the Inter-Governmental Maritime Consultative Organization (IMCO) by Hon. Lionel Chevrier, Canadian High Commissioner to the United Kingdom.

He has also built other models of the same ship for the Department of Transport and for the Burrard Drydock Company in Vancouver.

"I am not a person who can remain idle too long," says Mr. Demeules of his successful career as a master model maker.



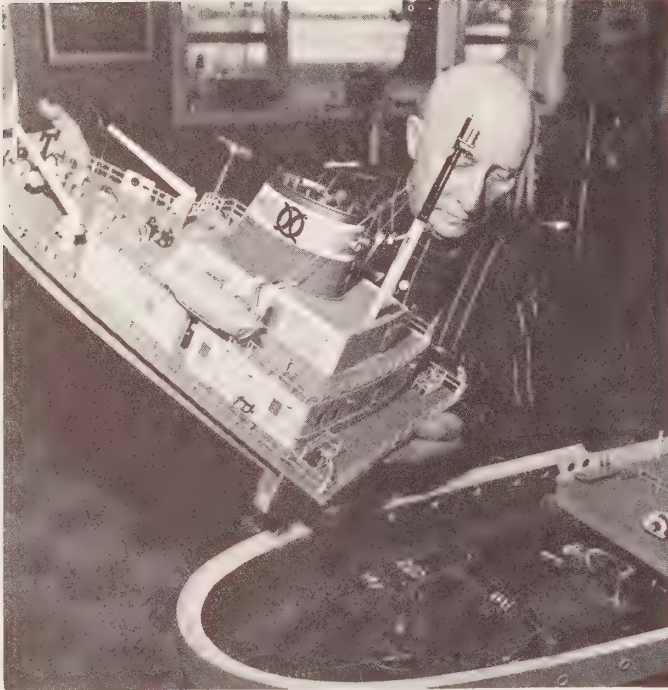
Mr. Demeules, standing beside one of the models he built for the Department of Transport exhibit at Expo 67, looks over a photograph taken when the model was tested in the "ice" of his swimming pool at Sorel, Que. (Department of Transport photo)

M. Philippe Demeules, de Sorel, est photographié ici près d'un des modèles qu'il a construit pour le spectacle monté par le ministère des Transports à l'Expo 67. Il tient en main une photo prise lorsque le modèle a été mis à l'essai dans la glace de sa piscine. (Photo du ministère des Transports.)

De petits brise-glace dans "la petite mer" de l'expo

par Edouard Deslauriers

Services d'information



M. Philippe Demeules soulève une section du pont d'un de ses modèles pour nous faire voir une partie de la chambre des machines. On aperçoit le moteur et d'autres dispositifs servant à actionner le gouvernail et l'hélice de ce modèle de 15½ pieds de longueur représentant un cargo pour le transport de minerai. (Photo du ministère des Transports.)

Master model maker Philippe Demeules, of Sorel, Que., raises a section of the deck of one of his models to show part of its "engine room." Shown are the engine and remote-controlled parts used to operate the rudder and the propeller of this 15½-foot model which represents an ore carrier. (Department of Transport photo)

Désireux de mieux faire connaître le rôle indispensable joué par la Garde côtière canadienne dans l'expansion économique, industrielle et maritime du Canada, le ministère des Transports a monté un spectacle qui constitue un attrait d'un tout nouveau genre pour les milliers de visiteurs à l'Expo 67.

Le spectacle, mettant en vedette les brise-glace de la Garde côtière canadienne, se déroule à quelques pas du Pavillon canadien dans un immense lac artificiel de 100 pieds de largeur par 200 pieds de longueur. Le lac, surnommé "La petite mer", est jonché de pains de styrofoam, lesquels sont enduits d'un produit qui leur donne l'apparence de blocs de glace recouverts de neige.

Trois modèles de navires, télécommandés d'une tour de contrôle érigée sur la rive, se déplacent dans le lac, bousculant les pains de styrofoam un peu à la façon dont les brise-glace se frayent un chemin dans les eaux de l'Arctique, dans le golfe Saint-Laurent, dans les Grands Lacs et dans les autres cours d'eau où leurs services sont requis pour ouvrir les voies au transport maritime.

Ces modèles sont tous construits selon une échelle d'un quart de pouce au pied. Ils sont l'œuvre de M. Philippe Demeules, de Sorel, P.Q., un constructeur de modèles qui maîtrise son art avec une telle perfection qu'il est reconnu comme le maître-modéleur au pays. De l'avis des spécialistes, il est quasi impossible de trouver des modèles construits avec plus de précision. Ils sont en effet construits avec un tel souci du détail qu'il est difficile d'admettre qu'il ne s'agit enfin que de modèles.

Un des trois modèles à l'Expo représente un cargo destiné au transport de minerai. Il est d'une longueur de 15½ pieds et pèse 1,100 livres. Il est escorté par un modèle de brise-glace de 7½ pieds et pesant environ 800 livres. Le troisième, représentant un brise-glace plus léger, est utilisé pour le balisage et aussi comme navire de ravitaillement. Sa mission principale, dans le lac de l'Expo, consiste à livrer des approvisionnements à un phare—autre modèle de M. Demeules—sur la rive opposée. Le modèle d'environ cinq pieds de longueur et pesant 200 livres s'arrête en cours de route pour poser et recueillir des bouées à l'aide de mâts de charge et de treuils manœuvrés par radio.

Le brise-glace porte le nom de «Louis S. St-Laurent», et, pour le construire, M. Demeules s'est inspiré des plans et devis servant à la construction du navire du même nom qui doit sortir des chantiers navals de Canadian Vickers, à Montréal, le printemps prochain.

Comme celui sur lequel il a été modelé, le «Louis S. St-Laurent» de M. Demeules est muni de trois hélices. Un moteur, à l'arrière, actionne le gouvernail, alors qu'un autre dans la chambre des machines met les hélices en marche. Un rhéostat relié au moteur sert à augmenter ou diminuer la vitesse. Le servo-moteur, organe principal servant au téléguidage par radio, est situé à l'avant du navire. Tout l'intérieur de la coque est guirlandé de quelque 800 pieds de fils électriques. Un accumulateur assure le fonctionnement de tout le mécanisme pour une période continue de quatre heures. Comme les spectacles sont d'une durée de 25 minutes par heure, l'accumulateur est rechargé pendant la nuit.

Le brise-glace plus léger servant au balisage et au ravitaillement porte le nom d'un ancien capitaine canadien, Joseph Bernier, qui s'est illustré dans des explorations de l'Arctique au tournant du siècle. Le «Joseph Bernier», comme le «Louis S. St-Laurent»,

est un modèle de perfection. Son seul défaut pour ainsi dire, et ceci a surpris même le constructeur lorsqu'on a mis le modèle à l'essai, c'est qu'il filait un peu trop vite même dans une couche de glace réelle. M. Demeules a donc été obligé d'ajouter un dispositif au moteur pour en réduire la vitesse.

De son côté, le cargo servant au transport de minerai, ressemble en tout point à n'importe quel navire du genre circulant actuellement dans les eaux canadiennes. A cause de son poids de près d'une demi-tonne, il est mû par des moteurs évidemment plus puissants que ceux utilisés dans les deux autres modèles. Les ailes de l'hélice sont mobiles, permettant ainsi d'ajuster le tangage et même d'arrêter le navire alors que les moteurs sont encore en marche.

Le phare sis de l'autre côté du lac est modelé sur celui du haut-fond Prince dans le fleuve Saint-Laurent, à l'embouchure du Saguenay. Construit, comme les navires, de matières résistant à la corrosion, le phare est muni d'un bossoir avec embarcation, de feux et antennes de radar pivotants ainsi que d'échelles, garde-fous, fenêtres et même d'un hélicoptère.

La coque des navires est faite de fibres de verre. Les autres principaux matériaux utilisés dans la construction des modèles sont le zinc et le bronze.

En soirée, les nombreuses petites lampes électriques disposées sur le pont des navires mettent du réalisme dans la démonstration et ajoutent à l'éclat du spectacle.

Comme on l'a expliqué plus haut, les modèles sont téléguidés du rivage. Un préposé à la tour de contrôle dirige les opérations à l'aide d'un tableau disposant d'une série de commutateurs qui transmettent les signaux de direction au servo-moteur de chacun des navires. Ce système de contrôle par radio a été conçu par M. Ernest Apps, de Toronto.

M. Demeules a mis près d'un an et demi à construire ses modèles. Tout le travail a été effectué dans l'atelier du sous-sol de sa demeure, à Sorel. Son fils, Yvon, qui est dessinateur en mécanique, a tracé les plans qui ont servi à la construction des pièces motrices et qui ont situé leur emplacement à l'intérieur de chaque modèle. Jouissant du même esprit créateur que le père, Yvon a également construit plusieurs pièces détachées, comme les hélicoptères, les embarcations de sauvetage, les mâts de charge et autre équipement du genre à bord des navires.

Natif de Laprairie, P.Q., Philippe Demeules s'est initié très jeune au métier qui allait un jour devenir son gagne-pain. Encore à l'école primaire, il avait déjà développé un goût prononcé pour la mécanique et les choses du domaine artistique. Le dessin était surtout son fort.

A l'âge de 16 ans, il quitte l'école pour passer à l'emploi d'une entreprise commerciale comme dessinateur. Lors de l'ouverture de l'École des Beaux Arts, à Montréal, en 1920, Philippe retourne à la classe pour parfaire sa formation. Après une période de huit mois d'études, il retourne à la planche à dessin pour le compte de diverses entreprises avant de finalement décrocher, en 1952, un premier contrat pour la construction d'un modèle de navire. Ce contrat, pour le ministère des Transports, est accordé en vue de la construction d'un modèle du brise-glace «d'Iberville». C'est le lancement de sa carrière de modelleur. Il était alors âgé de 48 ans.

Depuis lors, Philippe Demeules est à son propre compte, et ses services sont tellement en demande qu'il lui est impossible d'accepter tous les contrats qui lui sont offerts.

Il y a quelques mois, il a construit, selon une échelle d'un huitième de pouce au pied, un modèle du nouveau navire météorologique «Vancouver». Ce modèle, encastré dans une châsse de verre, a été présenté à l'Organisation intergouvernementale consultative de la navigation maritime (IMCO) par le haut-commissaire canadien de l'époque à Londres, l'honorable Lionel Chevrier.

Il a également construit d'autres modèles de ce même navire pour le ministère des Transports et pour les chantiers de Burrard Drydock, à Vancouver.

Philippe Demeules n'est pas de ceux qui peuvent demeurer inactifs trop longtemps. Ses modèles de l'Expo à peine complétés, il se penchait immédiatement sur d'autres contrats qui requièrent toute l'attention du maître-modelleur.



Le modèle du "Louis S. St-Laurent", en plus des moteurs actionnant le gouvernail et mettant en marche les trois hélices, renferme, dans la chambre des machines, un rhéostat qui sert à diminuer ou augmenter la vitesse. Le constructeur du modèle, M. Philippe Demeules, de Sorel, P.Q., nous fait voir les entrailles de son navire, comprenant les pièces motrices et quelque 800 pieds de fils électriques. (Photo du ministère des Transports.)

The model of the Louis S. St-Laurent has, in addition to the engines operating the rudder and the three screws, a rheostat which is used to increase the propulsion power. (Department of Transport photo)

IN THE NAME OF FRIENDSHIP

An 18th Century friendship that began during the exploration of Canada's Pacific Coast was commemorated at D.O.T. headquarters in Ottawa recently.

The occasion was the presentation of an antique brass plaque and a portrait of Spanish navigator Juan Francisco de la Bodega y Quadra to the Canadian Coast Guard by the Government of Spain.

The presentation, which was made by His Excellency Javier Conde, Spanish Ambassador to Canada, took place in the office of Gordon W. Stead, Assistant Deputy Minister, Marine, who



Gordon W. Stead, left, Assistant Deputy Minister, Marine, thanks His Excellency, Javier Conde, Spanish Ambassador to Canada, following the presentation of a brass plaque and painting commemorating the Spanish explorer Don Juan de la Bodega y Quadra after whom the weathership CCGS Quadra was named.

M. Gordon W. Stead, à gauche, sous-ministre adjoint pour la marine, remercie Son Excellence Javier Conde, ambassadeur d'Espagne au Canada, qui vient de présenter à la Garde côtière canadienne une plaque de cuivre et un portrait du navigateur espagnol Juan Francisco de la Bodega y Quadra. Le navire météorologique "Quadra" est nommé d'après cet explorateur.

Mr. Stead and the Spanish Ambassador, right, discuss the history of the plaque and painting of the Spanish explorer Quadra with Carmelo Matesanz, left, Spanish Charge d'Affaires, and Colonel Jose Juega, the Spanish Air, Military and Naval Attache, who were on hand for the presentation.

M. Stead et l'ambassadeur d'Espagne, à droite, s'entrelient avec le chargé d'affaires à l'ambassade d'Espagne, M. Carmelo Matesanz, à gauche, et l'attaché militaire espagnol, le colonel Jose Juega, lors de la présentation de la plaque et du portrait du navigateur Quadra.



received the gifts on behalf of the department and the Coast Guard.

The plaque and the portrait will be placed aboard the new Canadian Coast Guard weathership *Quadra*, which was launched in Vancouver last summer.

CCGS *Quadra*, due to enter service this summer, and her sister weathership, CCGS *Vancouver*, were named after Captain Quadra and English explorer Captain George Vancouver.

The two ships were built to man Ocean Station "Papa" in mid-Pacific as replacements for the weatherships *Stonetown* and *St. Catharines*.

Vancouver and Quadra, who explored the Pacific Coast during the same period, met in 1792 at Nootka Sound in what is now the province of British Columbia.

Captain Vancouver, who was the first navigator to sail around Vancouver Island, named it "Quadra and Vancouver's Island" in honor of the friendly relationship that had developed between himself and Quadra.

The double name fell into disuse in the 19th Century, but the name of the Spanish explorer is perpetuated by Quadra Island in Discovery Strait.

The presentation of the gifts to Mr. Stead recalled the launching of the *Quadra* last July in Vancouver at the yard of Burrard Dry Dock Company Limited.

The Spanish ambassador was to have been present for the ceremony but was unable to do so because of unexpected commitments. He was represented at the time by the Spanish Charge d'Affaires, Carmelo Matesanz, who announced that Spain would be making the gift to the ship.

In accepting the plaque and painting from Ambassador Conde, Mr. Stead recalled the historical events involved.

He also voiced the appreciation of the Department of Transport and of the Canadian Coast Guard in particular for the generous gesture on the part of the Spanish Government.

It would keep alive, he said, the colorful bit of history of special significance to the Coast Guard and of interest to all Canadians.

It was pointed out too that the explorers' friendship was also remembered last November when a scale model of the two weatherships was presented to the headquarters of the Inter-Governmental Maritime Consultative Organization (IMCO) in London.

The presentation was made on behalf of Canada by the High Commissioner for Canada, Hon. Lionel Chevrier, to Jean Morin, president of the 64-nation IMCO Assembly.

In his remarks prior to making the presentation, Mr. Chevrier pointed out that the names of the two new ships were given special significance because of the two explorers.

They are commemorated by the inscriptions on four bronze plaques (one in each of the official languages of IMCO) attached to the table on which the ship model is mounted.

The plaques note the date of the presentation and give brief particulars as to the dimensions, equipment and duties of the vessels and their historic background:

"Captain George Vancouver and Don Juan Francisco de la Bodega y Quadra, explorers of the Pacific Coast of Canada, brought together by their countries' rivalry, in personal friendship kept the peace and worked together for the advancement of knowledge."

UNE VIEILLE AMITIÉ

On a rappelé dernièrement à l'Administration centrale du ministère des Transports à Ottawa le souvenir d'une amitié datant du 18^e siècle, à l'époque des explorations de la côte canadienne du Pacifique.

Ce souvenir a été rappelé à l'occasion de la présentation à la Garde côtière canadienne par le gouvernement de l'Espagne d'une plaque de cuivre et d'un portrait du navigateur espagnol Juan Francisco de la Bodega y Quadra.

La présentation, faite par Son Excellence Javier Conde, ambassadeur d'Espagne au Canada, s'est déroulée dans le bureau de M. Gordon W. Stead, sous-ministre adjoint pour la marine, qui a accepté les dons au nom du Ministère et de la Garde côtière.

La plaque et le portrait seront exposés à bord du navire météorologique *Quadra* de la Garde côtière canadienne, lancé à Vancouver l'été dernier.

Le n.g.c.c. *Quadra*, censé entrer en service l'automne prochain, et son navire météorologique jumeau, le n.g.c.c. *Vancouver*, portent les noms du capitaine Quadra et du capitaine George Vancouver, explorateur anglais.

Ces deux navires ont été construits pour constituer la station océanique *Papa* située au milieu du Pacifique, en remplacement des navires météorologiques *Stonetown* et *St. Catharines*.

Les capitaines Vancouver et Quadra explorèrent la côte du Pacifique durant la même période et se rencontrèrent tous deux en 1792 à Nootka Sound, dans ce qui est aujourd'hui la province de la Colombie-Britannique.

Le capitaine Vancouver, premier navigateur à contourner l'île de Vancouver, lui donna le nom d'île de Quadra et de Vancouver, en souvenir des liens d'amitié qu'il avait noués avec Quadra.

Le double nom de l'île cessa d'être employé au 19^e siècle, mais l'île de Quadra dans le détroit Discovery perpétue le nom de l'explorateur espagnol.

La présentation des dons à M. Stead rappelait le lancement du *Quadra* en juillet dernier à Vancouver aux chantiers de la Burrard Dry Dock Company Limited.

L'ambassadeur d'Espagne devait assister à la cérémonie mais avait été empêché en raison d'engagements imprévus. Il avait alors été remplacé par le chargé d'affaires espagnol, M. Carmelo Matesanz, qui avait annoncé que l'Espagne ferait ce don au navire.

En acceptant la plaque et la peinture présentées par l'ambassadeur Conde, M. Stead a fait mention des souvenirs historiques qui s'y rattachaient. Il a exprimé la gratitude du ministère des Transports et de la Garde côtière canadienne en particulier pour ce geste magnanime du gouvernement de l'Espagne.

Ainsi serait rappelé, a-t-il dit, un événement historique qui touche particulièrement la Garde côtière canadienne et qui suscite l'intérêt de tous les Canadiens.

Il a également signalé qu'on avait rappelé en novembre dernier l'amitié unissant les explorateurs, lors de la présentation d'une maquette des deux navires météorologiques au siège de l'Organisation intergouvernementale consultative de la navigation maritime (IMCO) à Londres.

C'est le haut-commissaire du Canada, l'honorable Lionel Chevrier, qui avait présenté la maquette au nom du Canada à M. Jean Morin, président de l'Organisation qui groupe 64 pays.

Prenant la parole avant de présenter la maquette, M. Chevrier avait souligné que les noms des deux nouveaux navires ont une certaine résonance internationale, en raison des deux explorateurs.

Le souvenir en est rappelé par les inscriptions qui figurent sur les quatre plaques de bronze (une pour chaque langue officielle de l'IMCO) installées sur la table qui supporte la maquette.

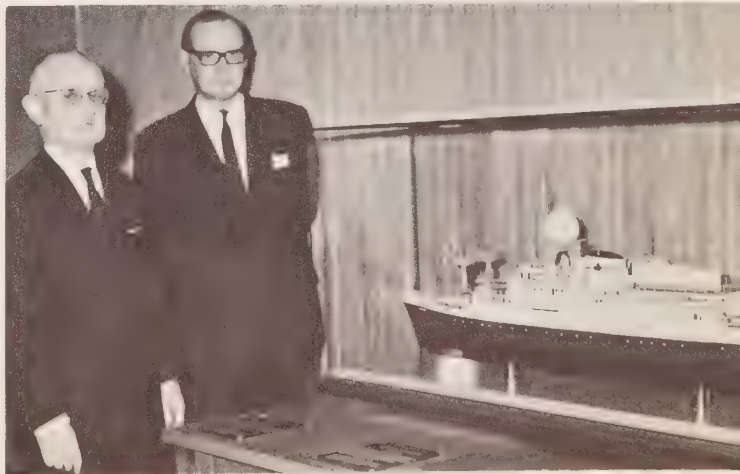
On y trouve mentionnées la date de la présentation de la maquette, de brèves caractéristiques sur les dimensions, l'équipement et les fonctions des navires ainsi que les renseignements historiques suivants:

«Le capitaine George Vancouver et Don Juan Francisco de la Bodega y Quadra, explorateurs de la côte canadienne du Pacifique, que la rivalité de leurs deux pays mit en présence, surent grâce à leur amitié personnelle maintenir la paix et travailler ensemble au progrès de la science.»

1792

GIFT FROM CANADA—Jean Roullier of France, left, secretary general of the Intergovernmental Maritime Consultative Organization (IMCO), and E. C. V. Goad, deputy secretary general, look over a scale model of the new Canadian Coast Guard Pacific Ocean weather ships *Vancouver* and *Quadra*. The model was presented to IMCO by Hon. Lionel Chevrier, Canadian High Commissioner to the United Kingdom, acting on behalf of Canada at a special meeting of the IMCO Assembly held in London. Mr. Chevrier was introduced at the meeting by Gordon W. Stead, Assistant Deputy Minister, Marine, Department of Transport, Ottawa.

UN CADEAU DU CANADA—M. Jean Roullier, de la France, à gauche, secrétaire général de l'Organisation intergouvernementale consultative de la navigation maritime (IMCO), et M. E. C. V. Goad, secrétaire général adjoint, admirent un modèle à l'échelle des nouveaux navires météorologiques de la Garde côtière canadienne, le *Vancouver* et le *Quadra*. Le modèle a été présenté à IMCO par l'honorable Lionel Chevrier, haut-commissaire canadien auprès du Royaume-Uni, au cours d'une réunion d'IMCO à Londres. M. Chevrier a été présenté à la réunion d'IMCO par M. Gordon W. Stead, sous-ministre adjoint pour la marine, ministère des Transports.



d.o.t. curlers defend pride of newfoundland

by Bryan Goodyer

Information Services Division

In the annals of the roaring game, the province of Newfoundland has been traditionally overlooked in national competition.

But this year, thanks to the efforts of four Department of Transport employees from Goose Bay, Labrador, Newfoundland reserved a special place in the history of curling in Canada.

As most Canadians know by now, the Newfoundland and Labrador team didn't sweep the 38th annual Canadian Curling Championships to win the Macdonald Brier Tankard.

But Len Kalichak, Doug Ellis, John Strugnell and Duane Olson, who arrived for the matches regarded as the "newcomers," left some surprised curling fans with the impression that Newfoundland may no longer be "taking it on the chin."

Len, 32, the team's skip, is an air traffic controller at Goose Bay, as are Doug, 34, who plays third, and Duane, 29, who plays lead. John, 28, the team's second, is office supervisor at the airport.

John is also the only native Maritimer of the foursome. Doug and Duane hail from Saskatchewan while Len Kalichak is a native of Manitoba.

All have been playing together just over a year at the Royal Canadian Air Force Curling Club at Goose Bay.

Lightly regarded when the Brier matches began March 6 in the arena at Hull, Que., across the Ottawa River from the Capital, the Kalichak rink, which had to win 15 straight games in Newfoundland to gain the right to represent the province at the Brier, quickly caught the attention of the large press corps in attendance and an opening day crowd estimated at 2,500 spectators.

In one of their best games, the D.O.T. rink—to the surprise of everyone including themselves—almost scored an upset over the 1966 champion Alberta rink of Ron Northcott on the opening day of the series.

As one sports reporter put it: "Given little chance in the pre-Brier betting, Kalichak came up with a tremendous effort after losing his first game to lightly-regarded Northern Ontario 10-4.

Another reporter commented: "Normally, the first day of the Brier gets few people excited but when it became apparent that the day's bit of drama would be provided by the seemingly least worthy team of the lot, the entire arena began looking for the unexpected."

Unfortunately, the unexpected happened the same night when John Strugnell, on his way to an elevator in Ottawa's Chateau Laurier Hotel where the teams were staying, tripped on a newly-installed carpet and fell, badly spraining his right ankle.

"It won't be surprising," syndicated columnist Jim Coleman commented the day after John's fall, "if peppery Premier Joey Smallwood pulls Newfoundland out of the Canadian Confederation (because of it)."

John's accident caused the team to play a man short for the next three games, all of which they lost, but the newcomers rallied and managed to finish the series in a tie for seventh place with three games won and seven lost.

They also won the unabashed admiration of everyone present for the Brier even though, as Len Kalichak said: "Everyone likes to root for the underdog."

What did they think of their week at the Brier?

"We had a good week," said Skip Kalichak with a smile, "although I wish we could have won more games."

Added Duane Olson: "Sure John's accident hurt us, but we all enjoyed the chance to play in the Brier for the first time. It's been great."

And so the quartet headed back to Goose Bay, headquarters of air traffic control for the Atlantic region, where the busy summer season awaits them.

And after that?

"More curling, naturally," the team agreed to a man.



Left to right, Doug Ellis, Len Kalichak, John Strugnell and Duane Olson.

WINTER

in NOVA SCOTIA



Les tempêtes en mer ont fait de lourds dégâts, cette année, sur les côtes de la Nouvelle-Écosse et de la Colombie-Britannique. Les photos à droite nous font voir les dommages considérables causés au phare de Pine Island sur la côte du Pacifique. Dans la photo ci-dessus, un membre d'équipage du n.g.c.c. "William Alexander", est hissé à bord d'un hélicoptère après avoir complété son examen d'un chalutier échoué sur un récif près de Forchu, petit village de pêcheurs situé sur la côte de Cap Breton en Nouvelle-Écosse. Dix personnes ont perdu la vie dans ce naufrage.

A crewman from the Canadian Coast Guard icebreaker Sir William Alexander is hoisted from the wreck of the 91-foot steel trawler Iceland II by a Royal Canadian Air Force Search and Rescue helicopter. (The icebreaker can be seen standing by in the far background.) Ten men lost their lives when the trawler ran aground in February near Forchu, a small fishing village on the east coast of Cape Breton in Nova Scotia. The accident apparently happened while the area was being battered by a stiff southeast gale.

FURY...

and BRITISH COLUMBIA

Pine Island, B.C.—The worst damage in the history of British Columbia's coastal lighthouses was inflicted here recently when a 50-foot wall of water slammed into this tiny island during a raging storm.

Lightkeeper Rex Brown, 43, was reported to have credited a premonition of disaster with saving his life and that of his 49-year-old assistant, J. P. Lewis, as the two men were inspecting the station's powerhouse during the storm.

"It was like an earthquake," recalled Mr. Brown, who said he turned to his partner and shouted "let's get out of here" just before the wall of water struck the building.

The giant wave, which slammed the island as 100-mile-an-hour winds howled, flattened the powerhouse seconds later, carried away three 2,000-gallon fuel tanks, smashed a radio beacon, deposited a shed on the front porch of Mr. Lewis' home, washed away a boathouse and punched holes in the concrete base of the light beacon.

The wave hit early Feb. 18, but no word was heard from the station until late in the day when a Dutch freighter radioed that the lightkeepers and their families had escaped injury in the storm.

The six residents of the lightstation, located on an island off the northern tip of Vancouver Island $\frac{3}{4}$ th of a mile long by $\frac{1}{2}$ a mile wide, included Mr. and Mrs. Brown and their two children and Mr. Lewis and his wife.

Coast Guard officials dispatched CCGS *Camsel* to the scene with building supplies, food, a pre-fabricated shed, a diesel generator, fuel, fog alarm equipment, an aerial hoist and winch, and a shore party of 15 men to help put the station back in operation.

In a report on the storm to L. E. Slaght, district marine agent at Victoria, Mr. Brown said: "My severest personal loss, apart from tools which can be replaced and are only worth money, was two boxes that were down in the building in the process of being packed. One contained about a dozen volumes of rare B.C. historical books with a market value of \$250, duplicates from my collection. These were individually wrapped in thick newspaper and would have survived water damage but were carried away. The other, a good-sized wooden box contained all my photograph albums, part of a fine stamp collection that was my father's, and a lot of old family items."

In letters to the lightkeepers and their families, Mr. Slaght said, in part: "You have gone through the most trying and nerve-racking experience I hope you will ever encounter. The stoic, calm and capable manner that you displayed in handling the hazardous experience and encountering the full fury of the storm-tossed sea, shows considerable personal strength."

Mr. Slaght said that the Department was planning to undertake the construction of two new dwellings, a fog alarm building and storage building later on this year.

The worst damage inflicted on a station prior to this occurred at Egg Island Light, 25 miles northwest of Pine Island, when a storm levelled both installation and buildings on Nov. 2, 1948.



Mr. and Mrs. R. P. Brown, Twinkie and Rex



Mr. and Mrs. J. P. Lewis

PART II

the york boat

by J. R. K. Main

This is the second of a Centennial series on early transportation in Canada, written especially for the "The DOT" by J. R. K. Main, a former director of civil aviation with the D.O.T. Mr. Main's book, "Voyageurs of the Air," is being published by the Department as a Centennial project.

The large birch bark canoe, as a vessel of commerce, gave way to the York boat about 1800. A number of events converged to bring this about. The two great fur trading companies, Hudson's Bay and the North West Company, after severely mauling each other in cut-throat competition, were at last merging and looking for ways to reduce operating costs. Beaver were nearing extinction in many parts of Canada and the distances travelled to procure furs were increasing alarmingly. Voyageurs were becoming scarce, wages were high; and the canoe, that had served so well for so long, had to be replaced by something more efficient.

Improvement of the routes across many of the portages made the use of a boat feasible. Horse and bullock-cart transport (the Red River cart) were available over several of the long portages and roads, or at least good dirt tracks, had been built on many of the others.

The York boat, so called because it was first built at York Factory near the mouths of the Nelson and Hayes rivers on Hudson Bay, met the need of the time. It was anything but an elegant craft. Long and narrow in design, it was heavy in con-



struction and sluggish in use. Coarse boards, whip-sawed out of local timber, provided the material. The length usually ran to 40 feet with a width or beam of about 10 feet. The bottom was flat, but underlaid by a stout keel that helped to take the strain when the boat (sometimes partially laden) was hauled over log rollers in shallow water or across a portage. Heavy posts, at prow and stern, held the side planking where it came to a point at each end. Some boats had rudders, but others depended on a long oar or sweep for control.

The York was propelled in a number of ways, most of them back-breaking. In swift water, it was polled by the crew, walking and stumbling, on the cargo. In deep water, oars or sweeps, up to 14 feet in length, were used. The fulcrum, or rowlock of the sweep, consisted of two stout wooden pegs driven into the gunwall. Each sweep was handled by one crewman standing on the cargo. No coxswain called the stroke, hollered "Now, all together, ho heave ho!" or any such non-democratic nonsense. Each man handled his own sweep in his own way. In spite of these defects, a speed of six knots is claimed for the York boat.

Towing harness and lines or ropes were also provided for

hauling a boat up very swift water. This procedure, much hated by the men, was called "tracking," always rugged and sometimes dangerous work on a rock or boulder-strewn shoreline.

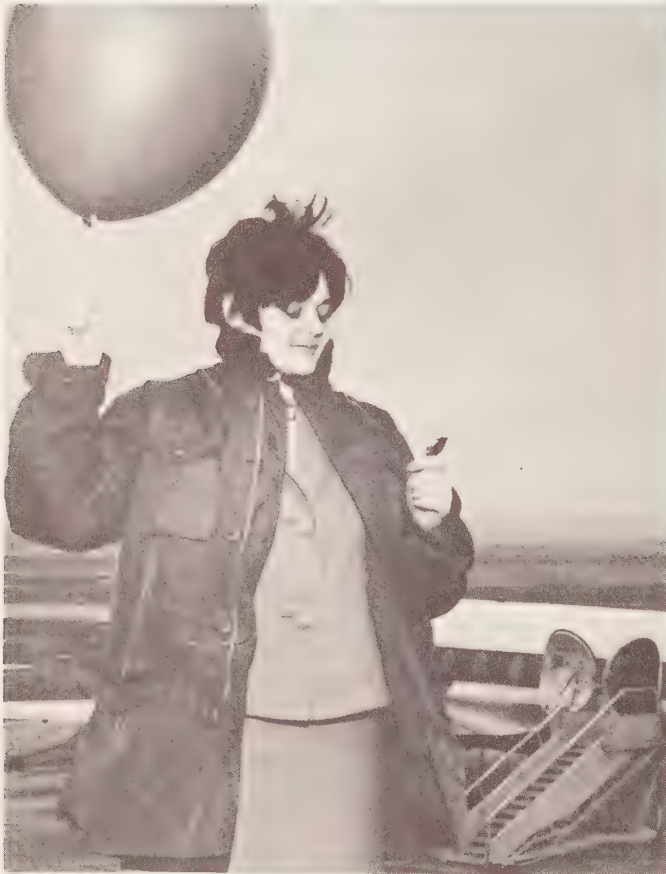
A mast was carried and occasional relief provided by a square sail. This hung from a cross spar fixed near the masthead, with the bottom corners held by two shroudlines, like a spinnaker. It could sail fairly close to, but not into the wind.

The crew varied between eight and 15 men. With a depth or draft of three feet or more, the useful load could run to eight or nine tons though the total displacement was about twice this figure. And although there was no Marine branch to prescribe a Plimsoll line, a respect for the sudden and fierce lake storm striking an open boat generally held them within safe limits.

From the Red River to the Arctic and from the Lakehead to the Rockies, the York boat served the vital Canadian fur trade for well over half a century. Their numbers were never precisely recorded, but several hundred (estimates run as high as eight hundred), are known to have been in use at one time. They, along with the Red River cart, typify a way of life that came to a close only with the advent of the railway.

winsome weather watcher scores airport "first"

by Mary Botosan



Cloud ceiling check.

Thermometers, barometers and anemometers are the tools of her trade.

Twenty-one-year-old Joan Moreland is the newest addition to the staff of the Meteorology Branch of the Department of Transport at Windsor Airport and the first woman to be employed there as a meteorological technician.

The dark-haired young woman, whose home is in Wallaceburg, has been in the business for two years. She received her training with the Department of Transport at Uplands Airport in Ottawa, then worked for two years at Toronto International Airport before requesting a transfer to Windsor so she could be closer to her home.

An interest in geography and mathematics led Joan to apply for the position with the Meteorological service on the completion of Grade 12 at Wallaceburg High School.

"To qualify for the position, you must apply to the Department of Transport, Meteorological Branch, which often has posters in the post office telling of coming competitions," she said in a recent interview. "Generally, you are interviewed and write a 'sort of' IQ test which involves varied questions from cars to mathematical problems."

There are few women in comparison to the number of men who apply for the jobs with the Meteorological Branch, she said, adding: "There were 30 in our training class and only two girls. The other girl dropped out before completing her training and I was the only one to finish."

As a meteorological technician, Joan is required to take weather observations during her working shift and to assist pilots by personally providing them with all available weather information on routes and terminals in which they are interested.

The technician on duty is required to prepare and send out weather reports each hour of the day. Special observations are taken more frequently whenever precipitation of any kind begins or when visibility lowers due to precipitation or other obstructing phenomena such as smoke or fog.

Wet and dry bulb temperature readings are taken and from these the technician must determine the dew point and humidity. Barometric pressure is calculated from the barometer and wind velocity from an anemometer.

"We also go outside to observe the amounts and types of clouds and estimate their height," Joan said. "Some weather stations have automatic electronic equipment for measuring heights both day and night, but in Windsor we have only a ceiling projector for night use."

During the daylight hours, therefore, when ceilings fall to a thousand feet or less, it becomes mandatory to send up ceiling balloons from which the height of the base of the clouds can be calculated by making note of the length of time taken before the balloon fades from sight.

When the observation is completed, a perforated tape is typed up and the entire observation is transmitted by teletype in the form of a one-line report which is coded for the sake of brevity.

In addition to the hourly and special observations, more detailed information is sent out each six hours. These reports are referred to as synoptic observations, which form the basis of weather maps at major weather offices where forecasts are prepared.

Synoptic reports contain the amount of precipitation which has fallen during the past six hours, the maximum and minimum temperatures for a certain period of time, plus most of the current data which normally is contained in the hourly reports.

In the same manner as hourly observations, the synoptic report is sent out by teletype to Toronto and Montreal International Airports. From these two relay centres, the report is transmitted rapidly all over Canada, the United States and Europe.

There have been a few times during her career when Joan has had to make special reports for emergency landings of aircraft. At times, the technician may receive telephone inquiries from the local police asking for weather information on certain days in reference to an accident.

"In Toronto, I even received a few calls from people who said they had seen Martians and wanted to know if we had sighted any," she said.

"Being a girl, it might be a little more difficult to become an officer in charge," Joan said when asked about chances for advancement in the department.

Time spent and performance evaluation are the two main considerations for promotion. A minimum of seven years with the department is required to become OIC at a weather briefing station.

Joan said she enjoys working in Windsor. She added that she liked the Toronto International Airport but found that the city was "much too big for a small town girl like me."

Joan is the eldest daughter of Mr. and Mrs. Douglas Moreland of Wallaceburg.

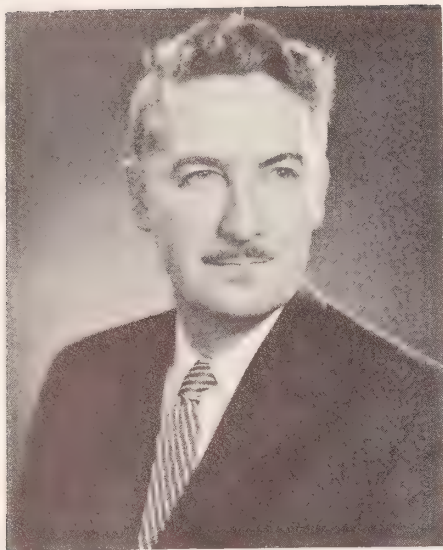
—reprinted from the *Windsor Star*



The long range forecast.



Barometer check.



T. G. How

Dr. Thomas G. How, regional director of air services at Vancouver, has been appointed deputy director of air services at Ottawa.

Dr. How was selected to replace C. M. Brant, who is retiring from the service on Nov. 1, 1967.

A native of Rouleau, Sask., Dr. How obtained his doctorate in physics from Purdue University after graduating with an honours BA degree and a master of arts degree from the University of British Columbia.

He first joined the Department of Transport in 1938 as officer in charge of the Edmonton weather office. In 1946, he became regional meteorologist in charge of the district aviation forecasting and public weather offices in the same city.

In 1948, he moved to meteorological headquarters in Toronto as superintendent of public weather forecast services. There he pioneered the development of direct radio weather broadcasts from forecast offices and conducted a series of weather broadcasts on the CBC network.

He returned to Edmonton in 1950 as district controller of air services and went to Vancouver in 1954 as regional director of air services.

In 1959, Dr. How was selected for a two-year assignment at headquarters. He served as deputy director of air services, assisting in planning and co-ordinating services and representing the department on various high level committees and at international organizations.

In 1959, he served as Canada's senior technical delegate at the ICAO Twelfth Assembly at San Diego and the following year he attended the ICAO Conference on Atlantic Weatherships at The Hague, Holland.

He resumed his position as regional director of air services at Vancouver in 1961.

M. Thomas G. How, directeur régional des Services de l'Air à Vancouver, a été nommé directeur adjoint des Services de l'Air à Ottawa.

M. How a été choisi pour remplacer M. C. M. Brant qui prendra sa retraite le 1^{er} novembre 1967.

Né à Rouleau, en Saskatchewan, M. How a obtenu son doctorat de l'Université de Purdue après avoir reçu les grades de bachelier ès arts avec distinction et de maître ès arts de l'Université de la Colombie-Britannique.

Il est entré au ministère des Transports en 1938 en qualité de fonctionnaire responsable du bureau météorologique d'Edmonton. En 1946, il devenait météorologiste régional responsable du bureau régional de prévision pour l'aéronautique et du bureau météorologique public d'Edmonton.

En 1948, il fut muté au bureau central de la Météorologie à Toronto à titre de surintendant des services de prévisions météorologiques à l'intention du public. Il y a travaillé à l'établissement de la radio-diffusion des bulletins météorologiques directement des bureaux de prévision et a dirigé une série d'émissions météorologiques sur le réseau de Radio-Canada.

Il est retourné à Edmonton en 1950 en qualité de régisseur régional des Services de l'Air puis, en 1954, il a été envoyé à Vancouver pour y occuper le poste de directeur régional des Services de l'Air.

En 1959, M. How était choisi pour faire un séjour de deux ans à l'Administration centrale. A titre de directeur adjoint des Services de l'Air, il a aidé à la planification et à la coordination des services et il a, à maintes reprises, représenté le Ministère au sein de comités formés à des paliers supérieurs et auprès d'organismes internationaux.

En 1959, il était le délégué technique supérieur du Canada à la douzième

appointments

nominations

Assemblée de l'OACI qui s'est tenue à San Diego et, l'année suivante, il assistait à la Conférence pour les navires météorologiques de l'Atlantique à La Haye, en Hollande.

Il est revenu en 1961 à son poste de directeur régional des Services de l'Air à Vancouver.



J. A. Lenahan

M. John A. Lenahan, directeur régional des Services de l'Air à Moncton, a été choisi pour remplacer M. T. G. How au poste de directeur régional des Services de l'Air à Vancouver.

Né à Durham (Ontario), M. Lenahan est un diplômé de l'Université de Toronto où, en 1934, il obtenait avec distinction un grade en mathématiques et en physique. Il a obtenu plus tard une maîtrise à la même université.

Entré au ministère des Transports en qualité de prévisionniste, en 1939, il a occupé des postes à Montréal, à Toronto et à l'aéroport international de Gander où il a été prévisionniste en chef pendant sept ans.

Au cours de ses années de service à Gander, M. Lenahan a aidé à la mise au point des techniques et des services nécessaires à l'exécution du service de prévisions météorologiques efficace que nécessite l'essor phénoménal des opérations aériennes au-dessus de l'Atlantique.

En 1956, M. Lenahan était promu au poste de prévisionniste en chef du bureau de prévision météorologique d'Uplands, à Ottawa.

En 1957, il était nommé directeur régional suppléant des Services de l'Air, à Moncton, et peu après, directeur régional des Services de l'Air de cette même région.

John A. Lenahan, regional director of air services at Moncton, has been selected to replace Dr. T. G. How as regional director of air services at Vancouver.

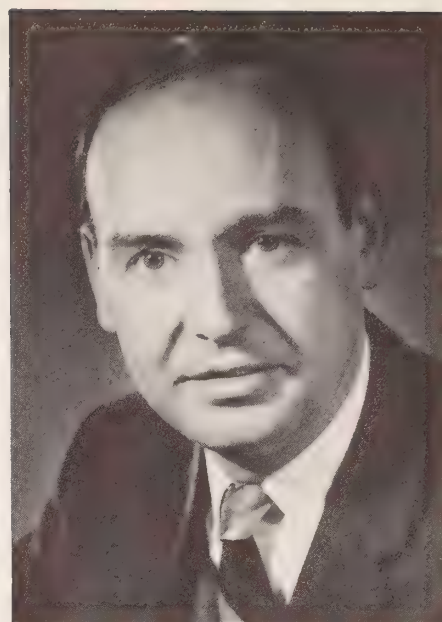
A native of Durham, Ont., Mr. Lenahan graduated from the University of Toronto in 1934 with an honours degree in mathematics and physics. He later received his master's degree from the same university.

Joining the Department of Transport as a weather forecaster in 1939, he served at Montreal, Toronto and Gander International Airport where he was chief forecaster for seven years.

During his period of service at Gander, Mr. Lenahan helped develop the techniques and services required to provide effective weather forecasting to meet the tremendous expansion in trans-Atlantic air operations.

In 1956, Mr. Lenahan was promoted to the position of chief forecaster at the Uplands weather forecast office, Ottawa.

He was named acting district director of air services at Moncton in 1957 and shortly after that was appointed regional director of air services there.



J. A. Kennerley

John Atkinson Kennerley, 33, has been appointed Director of Computer Services with the Department of Transport.

Mr. Kennerley, who graduated with a Bachelor of Science degree from McGill University in 1956, was formerly computer systems manager of Eaton's, Toronto.

Before joining Eaton's, he was director of the Montreal operations of J. Kates and Associates, a senior consultant with K C S Limited of Montreal, and a research analyst with the textile division of B. F. Goodrich (Canada) Limited, Kitchener, Ontario.

In his new position, Mr. Kennerley will direct the Computer Services Division of the D.O.T. in Ottawa and advise senior management on policy concerning computer operations.

Le ministère des Transports a nommé M. John Atkinson Kennerley, âgé de 33 ans, au poste de directeur des Services d'ordinateurs.

M. Kennerley, qui est un diplômé de l'Université McGill où il a obtenu son baccalauréat en sciences en 1956, était responsable des systèmes d'ordinateurs de la maison Eaton, à Toronto.

Avant d'entrer chez Eaton, il a été directeur pour Montréal de la maison J. Kates and Associates, conseiller senior de K C S Limited, de Montréal, et analyste de recherches à la division des textiles de B. F. Goodrich (Canada) Limited, de Kitchener (Ontario).

Dans l'exercice de ses nouvelles fonctions, Mr. Kennerley dirigera la Division des Services d'ordinateurs du ministère des Transports, à Ottawa, et il conseillera les paliers supérieurs de la gestion sur les lignes de conduite à suivre en matière de services d'ordinateurs.

Alex Burnside

One of the most colorful careers in the history of the Meteorological Branch came to a close recently with the retirement of Alex Burnside after 45 years of service.

Officially, Alex joined "the service" in May 1922 as an office boy. He was made a permanent employee on Aug. 20, 1931 when he was listed as an instrument maker's helper.

In June 1946, he started the first of a number of assignments in the north when he was sent to Southampton Island. Later he served at radiosonde stations at Baker Lake and Churchill.

Unofficially, the stories about Alex are legion, rich in the wit and human interest of the early days of the 20's when the meteorological service was establishing itself in "The Observatory" at 315 Bloor Street West in Toronto.

"In those days, Alex recalls, "all the weather forecasting for Canada with the exception of the B.C. coast was done from Bloor Street."

"Part of my job was to take a copy of the daily weather map over to Eaton's department store where it was put up so that everyone could see it" he said.

Fired because of his almost legendary escapades at least eight times in the first six months of his employment by Sir Frederick Stupart, who was then director of the service, Alex persevered by making sure there were no other applicants for his job so that he was inevitably re-hired.

"I remember Sir Frederick saying on one of the early occasions I was "fired": 'Burnside, you'll never hold a position and you'll never amount to anything,'" recalls Alex with a chuckle.

An incurable storyteller (many of the reminiscences of his career were recorded during an informal chat just prior to his retirement last February), Alex remembers with ease the details of exploits that ranged from being thrown into jail while out doing weather research, to meeting a polar bear face to face while stationed on lonely Southampton Island.

A classic episode involved a trip to a distant Quebec weather station, necessitated by a series of inaccurate observations. There, Alex discovered that the observer, who was also the community's mayor, fire chief and what-have-you, had gone hunting, leaving a list of weather statistics for the days ahead with the local telegrapher.

During his long career, Alex, who remains a dedicated sports enthusiast, won at least 200 trophies for marathon running.

He represented Canada in the marathon at the 1934 British Empire Games in London, England, and competed in the Boston marathon four times where he once finished in fourth and sixth place in two different races.

A manager, coach and trainer of numerous minor and intermediate hockey leagues around Toronto, Alex has long been active with boys' clubs and juvenile sports.

Miss Susan O'Neil

Miss Susan O'Neil retired from the real estate branch in January after completing 42 years with the Department of Transport.

Miss O'Neil began her lengthy service Jan. 17, 1925 in the secretary's office of the old Department of Roads and Canals. She transferred to the real estate branch on April 1, 1938.

During the war years 1939-45, she worked under Frank Thomas, wartime chief of the real estate branch, who was responsible for acquiring the airfields and ranges required by the British Commonwealth Air Training Plan.

At a party in her honor, Miss O'Neil was congratulated on her retirement by W. F. Whitman, the branch's general manager, and W. J. Killeen, assistant general manager, and presented with a gift from her friends in real estate.



Miss O'Neil and Mr. Whitman



Left to right, Fred Hunt, Frank Harris, Alex Burnside, and J. R. H. Noble, director of the Meteorological Branch.

R. S. Fulton

Robert Stewart Fulton, a D.O.T. employee who helped inaugurate air radio service in Canada, retired last February after 30 years service with the radio regulations division.

Mr. Fulton, a native of Steveston, B.C., joined the Department in 1937 as a radio operator.

Before that, he had spent 15 years at sea as a radio operator on cargo ships and on the Canadian Pacific Railway's trans-Pacific service to the Orient.

For nearly 20 years after joining the Department, Mr. Fulton was assigned to radio range stations in British Columbia and Alberta set up to give air radio service to what was then Trans-Canada Airlines.

In 1938, he was appointed officer in charge of the Carmi, B.C., radio range station at the top of a 4,000-foot mountain where he spent two and a half years in

semi-isolation with three other radio operators, a cook and a handyman.

His last assignment before coming to headquarters was at Ashcroft, B.C., where he helped to establish a new radio station. He remained there for 11 years before his transfer to Ottawa as a technical officer in the radio regulations division in 1955.

Upon his retirement, Mr. Fulton left on a conducted tour of Florida with his wife. After a visit to Expo 67, the couple planned to spend some time in the United Kingdom before taking up residence "somewhere in southwestern British Columbia".

The day he retired, fellow employees gathered to offer their good wishes and W. A. Caton, controller of radio regulations, presented Mr. Fulton with a farewell gift on behalf of the gathering.



Mr. and Mrs. R. S. Fulton and W. A. Caton

W. C. Thurber

W. C. Thurber, officer in charge of the Saskatoon weather office, has retired after 25 years with the Department of Transport.

Born in Nova Scotia, Mr. Thurber attended public and high school and qualified as a teacher. After teaching briefly, he decided to head west, as he put it, "to try my luck" in the Saskatchewan of 1922. There he obtained his degree from the University of Saskatchewan in 1936 and joined the Met. Branch in 1941.

As a meteorological officer, Mr. Thurber was assigned to posts that included Yorkton, Sask., Churchill, Man., and Norman Wells, N.W.T.

His two longest assignments were, however, a tour of duty as officer in charge of the forecast office at Fort William, Ont., from 1947 to 1951, and a tour of duty as head of the weather office at RCAF station Saskatoon from 1952 until the station closed in 1963.

Last Dec. 12, a group of 40 friends that included D. M. Robertson, regional meteorologist at Winnipeg, gathered in the air terminal building dining room at Saskatoon to honor Mr. Thurber and his wife Jean.



Mr. and Mrs. W. C. Thurber

CROSS CANADA DATELINE

Fire Loss Record Hits All Time Low

Ottawa—Fire damage to air services buildings and equipment during 1966 totalled \$8,020.44, the smallest annual loss since the figure was first recorded in 1948.

R. A. Harley, acting superintendent of emergency services and requirements, attributed the record to the keen interest shown by air services personnel across Canada in the D.O.T.'s fire prevention programs.

The record surpassed an all time low of \$12,214.50 set the year before.

The 1966 total included a loss of \$4,390 to buildings and \$3,630.44 to equipment in 42 recorded alarms in the six air services regions.

Le total des pertes par l'incendie est le plus bas enregistré jusqu'ici

Ottawa.—Les dommages aux bâtiments et au matériel des Services de l'Air causés par des incendies en 1966 s'établissent à \$8,020.44, soit la plus faible perte en une année depuis qu'on a commencé à enregistrer les pertes annuelles en 1948.

M. R. A. Harley, surintendant suppléant des services et des besoins d'urgence, a attribué cet heureux résultat à l'intérêt que le personnel des Services de l'Air, dans tout le Canada, a accordé aux programmes de prévention des incendies du ministère des Transports.

Ce chiffre record est encore plus bas que le record de \$12,214.50 obtenu l'année précédente.

Les pertes totales de 1966 comprennent \$4,390 de dommages aux bâtiments et \$3,630.44 de dommages au matériel pour les 42 incendies enregistrés qui ont donné lieu à une alerte dans les six régions des Services de l'Air.



SWEETHEART OF D.O.T.—Pauline Gervais, 19, a stenographer in the office of M. M. Fleming, chief of flight standards and regulations for the Civil Aviation Branch, has been named D.O.T. Queen for 1967. Miss Gervais won the honor after Brenda Whiteman, who was originally chosen as queen, dropped out.

REINE DES TRANSPORTS—Mlle Pauline Gervais, sténographe au bureau de M. M. Fleming, chef de la Division des normes et des règlements de vol à la Direction de l'aviation civile, a été proclamée la reine du ministère des Transports pour 1967. Mlle Brenda Whiteman, qui avait d'abord été choisie, a dû se retirer pour des raisons personnelles.

A Coast Guard First

Saint John—Citizens of Eastport, Maine, near the Canada-United States border, think their city may have been the first in the U.S. to stage an official celebration of Canada's Centennial with the help of the Canadian Coast Guard.

During a recent weekend, a proclamation marking the Centennial was issued by Eastport city council and a "fire of friendship" was ignited at Battery Field, site of old Fort Sullivan, which was occupied by British troops during the war of 1812.

The fire was lit by Captain Anthony David Croft of CCGS Thomas Carleton, who was flown to Eastport in a Canadian Coast Guard helicopter piloted by Lieutenant-Commander Hugh Tingley.

During the ceremony, at which members of city council took part, the city's church bells were rung and 100 volleys of rifle fire roared in unison.

The proclamation was later sent to Maine Senator Edmund S. Muskie for inclusion in the Congressional Record.

N.B. Volunteer Wins Met. Observer Award

Moncton—A New Brunswick man, who has been making voluntary weather observations for the past six years, was one of 24 Canadian weather observers honored recently by the Met. Branch.

Bernard Allan, an employee of the Fredericton research station, Department of Agriculture, was presented with an inscribed pendant type wall barometer by S. W. Dewar, superintendent of general weather services for the D.O.T.'s Moncton region on behalf of Met. director J. R. H. Noble.

In a personal letter which accompanied the award, Mr. Noble stressed that Canada is particularly fortunate to have the co-operation of many individuals such as Mr. Allan in maintaining weather stations.

He said the weather reports submitted by the observers along with the weather reports received from 275 stations staffed by D.O.T. employees are used in the compilation of weather statistics for the various monthly reports published by the branch.

To make their observations, the volunteers are supplied with the instruments necessary to observe and record temperature and precipitation twice daily.

These are the 13th annual awards presented to those selected on the basis of faithful service over a period of at least five year.

Highest Award Ever Presented to Widow

Ottawa—The highest award ever granted to a Department of Transport employee under the suggestion award incentive plan has been presented posthumously in Montreal.

In a brief ceremony, a cheque for \$680 was presented on Feb. 16 to Mrs. Denise Drouin of Laval des Rapides, Que., wife



J. P. Drouin



GUEST SPEAKER—Gordon W. Stead, centre, Assistant Deputy Minister, Marine, pauses during a recent visit to the Fleet School at Canadian Forces Base, Esquimalt. Mr. Stead's escorts during the visit were Petty Officer Doug Robinson, RCN, left, and Chief Petty Officer Ray Doucette, RCN, right, both members of the General List (Branch) Officers Qualifying Course being held at the school. In an address to the 56 candidates taking the course, Mr. Stead spoke and answered questions on the Canadian Coast Guard.

CONFÉRENCIER INVITÉ.—M. Gordon Stead (au centre), sous-ministre adjoint pour la marine, s'arrête au cours d'une visite qu'il a faite récemment à l'École navale de la base d'Esquimalt des forces canadiennes. Durant sa visite, M. Stead était accompagné du maître Doug Robinson de la Marine royale du Canada (à gauche) et du premier maître Ray Doucette de la Marine royale du Canada (à droite), tous deux inscrits au cours d'admissibilité au grade d'officiers, Cadre général qui se donne à l'école. M. Stead a adressé la parole aux 56 candidats qui suivent le cours et il a répondu à des questions sur la Garde côtière canadienne.

of the late J. P. Drouin, an electronics technician who was accidentally electrocuted while on duty at Fort Chimo, Que. on Nov. 20, 1964.

Prior to his death, Mr. Drouin had suggested that a number of surplus buildings at Frobisher, taken over by the Department of Transport from the United States Air Force, be used to house telecommunications equipment for a permanent instrument landing system.

It was found that conversion of the buildings to D.O.T. use would be cheaper than building new ones to house the equipment.

Another suggestion award winner was Miss Fernande Lanouette, a secretary at the Quebec marine agency in Quebec City granted a \$10 award for suggesting a change in the French language copy of a steamship inspection form that resulted in improved work methods.

La prime la plus importante accordée jusqu'ici est présentée à la veuve d'un fonctionnaire

Ottawa—Le plus fort montant qui ait encore été accordé comme prime à l'initiative à un employé du ministère des

Transports a été présenté à titre posthume, à Montréal.

Au cours d'une brève cérémonie, un chèque de \$680 a été présenté le 16 février à madame Denise Drouin, de Laval-des-Rapides (P.Q.), épouse du regretté J.-P. Drouin, un technicien électronique qui fut électrocuté alors qu'il était de service à Fort Chimo (P.Q.), le 20 novembre 1964.

Avant sa mort, M. Drouin avait proposé qu'on installe le matériel de télécommunications nécessaire à l'établissement d'un système permanent d'atterrissage aux instruments dans un certain nombre d'anciennes bâtisses de l'Air Force des États-Unis, à Frobisher, qui avaient été cédées au ministère des Transports.

On s'est rendu compte que la conversion à cette fin des bâtisses en question serait moins onéreuse pour le ministère des Transports que la construction de bâtiments neufs.

Une autre gagnante d'une prime à l'initiative est M^{lle} Fernande Lanouette, secrétaire à l'agence de la marine de Québec qui a reçu \$10 pour avoir proposé un changement à apporter à la version française d'une formule d'inspection de navires à vapeur, ce qui a entraîné une amélioration des méthodes de travail.

Transport

ALBUM

des Transports



TORONTO INTERNATIONAL AIRPORT

COST OF TERMINAL:

\$26,000,000

NO. OF RUNWAYS:

Four, ranging in length from 5,700 feet to 11,050 feet

PASSENGER TRAFFIC (1966):

approx. 4,000,000

AIRCRAFT MOVEMENTS (1966):

174,288

AÉROPORT INTERNATIONAL DE TORONTO

COÛT DE L'AÉROGARE:

\$26,000,000

NOMBRE DE PISTES:

Quatre de diverses longueurs allant de 5,700 pieds à 11,050 pieds

NOMBRE DE VOYAGEURS (1966):

environ 4,000,000

ARRIVÉES ET DÉPARTS (1966):

174,288

1175
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dot

JULY—AUGUST 1967

JUILLET—AOÛT 1967



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JUILLET-AOÛT

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COVER

Seven ships, led by the pride of the Canadian Coast Guard fleet, CCGS *Vancouver* and CCGS *Quadra*, paid a special salute to Canada's Centennial last June 10 during the sail-past that marked Coast Guard Day at the Victoria marine agency. Our seagull's-eye-view cover photo was taken by Ken Parks of the Information Services Division from a Canadian Coast Guard helicopter piloted by Doug Callin of Victoria.

FRONTISPICE

Sept navires de la Garde côtière canadienne, dans un déploiement en guise de salut au centenaire de la Confédération, ont défilé dans le port de l'Agence de la marine du ministère des Transports à Victoria (C.-B.), le 10 juin dernier, Jour de la Garde côtière. En tête du défilé, on voit les deux plus récentes acquisitions de la Garde côtière, le *Vancouver* et le *Quadra*. La photo a été prise par Ken Parks, de la Division des services d'information. Il se trouvait à bord d'un hélicoptère de la Garde côtière piloté par Doug Callin, de Victoria.

Editor Bryan Goodyer
Rédacteur français Edouard Deslauriers

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COMMON TIES

The article on communications for marine traffic in this issue emphasizes the close relationships within the Department. At times, members of individual units may think of themselves primarily as telecommunications, canal, marine, rail, aviation or meteorological officers. In fact, each branch draws a great deal from its neighbours within the Department; and because of its membership in a large single entity concerned with transportation as a whole, each branch benefits from the knowledge and experience of the other branches.

Thus, the first move towards a marine traffic control system in the St. Lawrence (see page 4) drew, in the first instance, from air traffic control experience. The helicopter operations of the

Coast Guard benefit from the support of the Civil Aviation Branch. Perhaps the best examples of all are the two new Pacific weather ships, the finest of their type in the world, built by the Shipbuilding Branch, operated by the Coast Guard primarily to serve the purposes of the Meteorological Branch, and with substantial technical assistance both in the design and the operation of the complicated electronic gear from the Telecommunications Branch.

These are good reminders of the fact that each unit benefits from its ties with the other types of operation within the Department; and each, in turn, contributes to the competence and experience of the others.

COLLABORATION ... INTERDÉPENDANCE

L'article qui, dans la présente livraison, a trait au système de communications pour la circulation maritime met en lumière l'interdépendance qui existe au sein du Ministère. Il peut arriver parfois que les fonctionnaires des divers services se considèrent comme des agents des télécommunications, des canaux, des services maritimes, ferroviaires, aéronautiques ou météorologiques. En réalité, chaque direction bénéficie dans une large mesure de l'apport des autres directions du Ministère, et parce qu'elle s'intègre dans un vaste organisme intéressé à l'ensemble des transports, elle tire parti des connaissances et de l'expérience des autres directions.

C'est pourquoi l'établissement d'un système de contrôle de la circulation maritime sur le Saint-Laurent a d'abord fait appel à l'expérience acquise dans le contrôle de la circulation aérienne.

La Garde côtière exploite ses hélicoptères avec l'appui de la Direction de l'aviation civile. Le meilleur exemple de cette collaboration est peut-être celui qu'offrent les deux nouveaux navires météorologiques du Pacifique, les plus modernes au monde, construits par la Direction de la construction navale, exploités par la Garde côtière principalement pour l'exécution des travaux de la Direction de la météorologie, et bénéficiant d'une importante aide technique de la part de la Direction des télécommunications tant en ce qui concerne la conception que le fonctionnement du matériel électronique complexe.

Voilà ce qui prouve à juste titre que chaque service du Ministère a avantage à collaborer avec les autres secteurs et que la compétence et l'expérience communes s'en trouvent enrichies.

J. R. Baldwin

Deputy Minister

Sous-ministre

New 'Watch' on the St. Lawrence

by Edouard Deslauriers
Information Services Division

An air traffic controller might be agreeably surprised these days if he were to come down from the clouds long enough to take a look at a new traffic information service now in operation along the St. Lawrence River.

The reason is that the new service, operated by bilingual controllers using V.H.F. (Very High Frequency) radio equipment, now keeps track of ship traffic on the increasingly busy St. Lawrence in much the same way as the air traffic controller watches over the crowded skies.

"I like to think of it as an air traffic system in a marine environment," said Captain George G. Leask, chief of the marine traffic control operation.

Capt. Leask says the service has had a "great response" from marine pilots and ships' captains such that "we're now moving into the area of management of traffic patterns."

The information needed to assist the ships' masters in the safe conduct of their vessels comes from two main traffic control centres (one at Quebec, the other at Montreal), six shore stations and 18 reporting points along the river between Montreal and Les Escoumins, Que.

Initially 20 D.O.T. personnel (the services' staff is now almost doubled) manned the facilities on a 24-hour-a-day basis with four main objectives:

- (1) to prevent collisions between ships;
- (2) to prevent collisions between ships and obstructions in the channel;
- (3) to maintain a safe, expeditious and orderly flow of traffic in the river;
- (4) to alert appropriate authorities when ships are in need of assistance.

To take advantage of the service, all ships navigating the river must be equipped with the required V.H.F. equipment.

The river is divided into four sections for traffic information and control purposes. Three of the sections, situated between Les Escoumins and Tracy, are controlled from Quebec City. The fourth, from Tracy to the upper limits of Montreal harbour, is controlled from a traffic centre set up in the harbour master's office in Montreal.

The four sections, with the radio frequency used in each, are as follows:

- (1) from Les Escoumins to Cape Maillard, 156.7 megacycles, channel 14;
- (2) from Cape Maillard to St-Antoine-de-Lotbinière, 156.6 megacycles, channel 12;
- (3) from St-Antoine-de-Lotbinière to Tracy, 156.55 megacycles, channel 11;
- (4) from Tracy to the upper limits of Montreal harbour, 156.6 megacycles, channel 12.

To ensure reliable transmission and reception of messages,

unmanned radio-telephone stations are located at strategic points along the St. Lawrence at Trois-Pistoles, St-Roch, Montmagny, Québec, Grondines and St-Barthélémy, and all are operated around the clock from the Quebec City control centre.

The Quebec centre is under the supervision of Captain Robert Therriault, who has had 17 years' experience as a marine officer and pilot with commercial shipping companies operating in Canadian waters.

All supervisors of the service are former first officers or captains with at least seven years' experience. The controllers themselves are certified radio operators.

The first of the 18 mandatory reporting points the ships encounter along the river is situated 20 miles east of Les Escoumins. The others are at Les Escoumins, the Prince Shoal light, Cape Salmon, Cape Goose, Cape Maillard, Cap Brûlé, St-Jean, Quebec, St-Nicholas, St-Antoine-de-Lotbinière, Ste-Croix, Batis-can, Trois-Rivières, Yamachiche Bend, Tracy, Contrecoeur and Cap St-Michel.

Upbound and downbound ships are required to report to the control centre when passing these various points. Their progress report contains such information as the name of the vessel, its location, its speed and weather conditions.

The service was set up as the result of studies initiated by D.O.T. in 1964. A working group was then set up to develop a concept for the provision of traffic information and an ultimate traffic control system in the navigation channel below Montreal.

Progress reports on this project were made at a series of meetings with members of the shipping industry in Montreal last year.

The first of the meetings was opened by the Hon. John Turner, who is now Canada's Registrar General, with Gordon W. Stead, Assistant Deputy Minister, Marine, acting as chairman.

Mr. Turner also referred to the traffic information service in a recent speech to the annual joint conference of the Dominion Marine Association and the Lake Carriers Association in Montreal on safety.

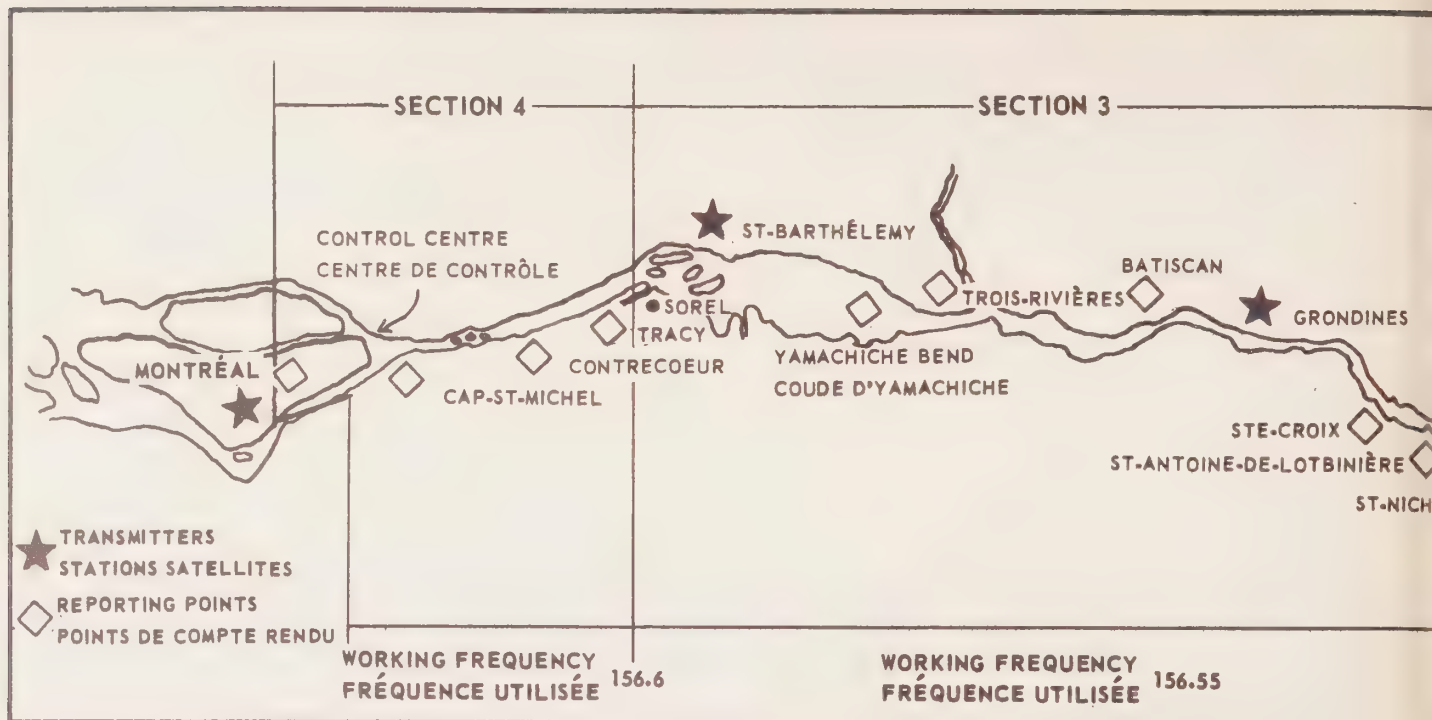
He said the development of a complete traffic management system "might include radar or other means of surveillance which would ensure that those concerned were aware of all vessels in the river whether fitted with radio or not (i.e. small craft, ferries, and dredges).

"We are moving towards one integrated system developing in the next few years over the whole area from the Gulf of St. Lawrence to the Lakehead," said Mr. Turner.



MARINE TRAFFIC CONTROL CENTRE AT QUEBEC—Left to right, Controllers Neil McNeill, Gerry Bisson and Henri Tremblay keep track of ships plying the St. Lawrence while Captain Robert Therriault, supervisor at the centre, indicates a point on one of the charts. (Department of Transport Photo)

CENTRE DE CONTRÔLE DE LA CIRCULATION MARITIME À QUÉBEC—Cette photo, prise au centre de contrôle de Québec, fait voir, de gauche à droite, les contrôleurs Neil McNeill, Gérald Bisson et Henri Tremblay. Debout, à l'extrême droite, le responsable du centre, le capitaine Robert Thériault, indique, sur une carte marine, l'endroit précis où se trouve un navire remontant le fleuve. (Photo du ministère des Transports)



Le ministère des Transports guette la circulation dans le Saint-Laurent

par Edouard Deslauriers
Services d'information

La circulation des navires dans le fleuve Saint-Laurent est maintenant contrôlée un peu à la façon dont on surveille la circulation aérienne de la tour de contrôle d'un aéroport. En effet, le ministère des Transports vient de mettre sur pied, le long du fleuve, un service de renseignements qui permet de diriger en quelque sorte la circulation des navires depuis Les Escoumins jusqu'à Montréal. Ce service, encore à ses débuts, est déjà acclamé comme l'une des plus importantes innovations dans l'histoire de la navigation maritime au pays.

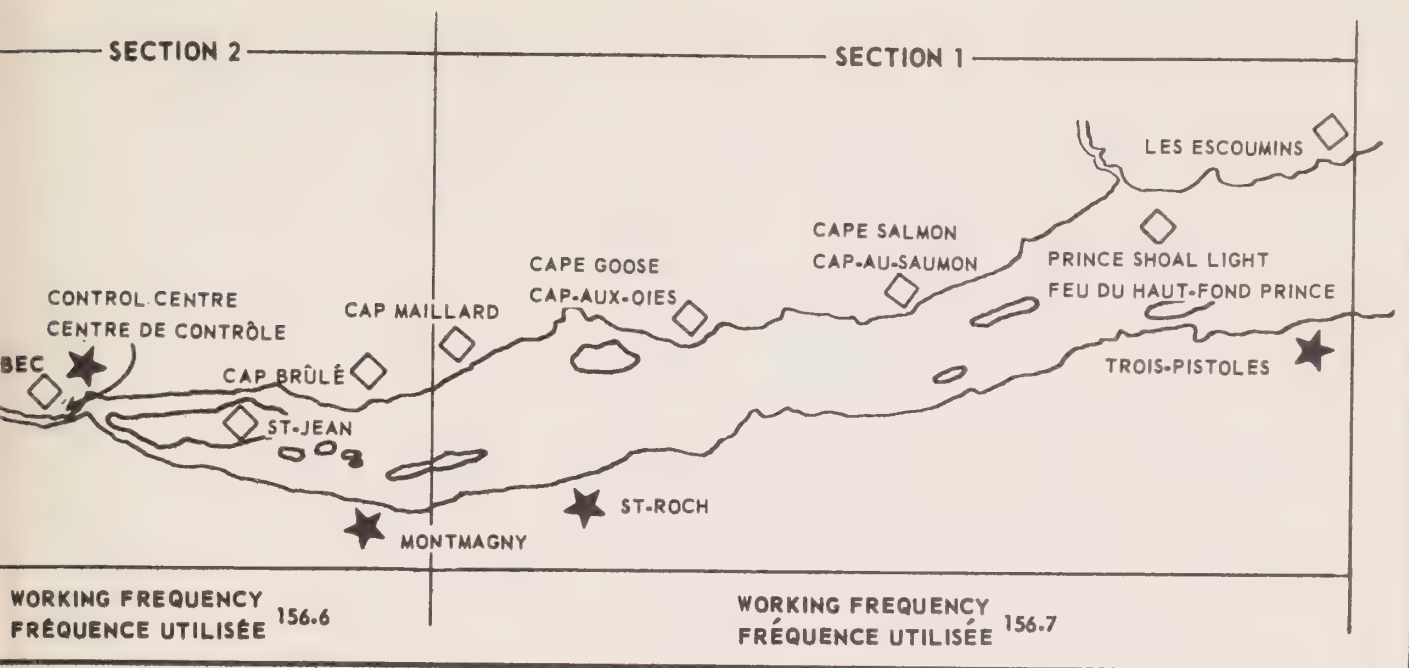
Conçu d'abord pour des raisons de sécurité, soit pour assurer dans la fleuve une circulation sûre, rapide et ordonnée, le service, en vigueur depuis le 4 avril dernier, s'est déjà révélé des plus efficaces.

Comme le disait récemment l'honorable John Turner, alors ministre d'État attaché au ministère des Transports, le Saint-Laurent est l'une des principales voies d'accès au cœur industriel du continent, et nous devons donc faire tout en notre possible pour améliorer constamment les services à la navigation dans cette voie, si nous voulons maintenir et même hâter le développement économique et industriel du pays.

Le ministère des Transports, conscient de son rôle dans ce domaine, a donc institué pour le Saint-Laurent ce service spécial de renseignements, lequel comporte, entre autres, deux principaux centres de contrôle, l'un à Québec et l'autre à Montréal.

Six stations satellites de radio-téléphone servant à assurer la transmission et la réception des messages sont commandées directement par les centres de contrôle où des préposés assurent un service de 24 heures. Ces stations satellites sont situées à des points stratégiques du fleuve, soit à Trois-Pistoles, Saint-Roch, Montmagny, Québec, Grondines et Saint-Barthélemy.

De plus, il y a 18 points de compte rendu obligatoire le long du fleuve. Lorsqu'un navire passe ces divers points en remontant ou descendant le fleuve, il doit faire rapport au centre de contrôle. Il s'agit de s'identifier, donner le nom du navire, son emplacement, sa vitesse et tous les autres détails jugés utiles concernant la navigation en général. Le premier point de compte rendu se trouve à 20 milles à l'est des Escoumins. Les autres sont situés aux endroits suivants: Les Escoumins, feu du haut-fond Prince, Cap-au-Saumon, Cap-aux-Oies, cap Maillard, cap Brûlé, Saint-Jean, Québec, Saint-Nicholas, Saint-Antoine-de-Lotbinière, Sainte-Croix, Batiscan, Trois-Rivières, le coude d'Yamachiche, Tracy, Contrecoeur, et Cap Saint-Michel.



Le but premier visé par l'exploitation de ce service, assuré par liaison VHF (très haute fréquence), est de fournir aux capitaines des navires des renseignements leur permettant de diriger leurs navires en toute sécurité. Le chef du contrôle de la circulation maritime, le capitaine George G. Leask, précise que le service a été conçu pour répondre à quatre principaux objectifs, soit empêcher les abordages entre navires, empêcher les collisions entre les navires et des obstacles quelconques dans le chenal, assurer une circulation sûre, rapide et ordonnée dans le fleuve et enfin avertir les autorités compétentes lorsque des navires ont besoin d'aide.

Aux fins de la transmission des renseignements et du contrôle de la circulation, le fleuve est divisé en quatre sections. Le centre de contrôle de trois de ces sections, situées entre Les Escoumins et Tracy, se trouve à Québec. Celui de la quatrième section, qui s'étend de Tracy jusqu'aux limites amont du port de Montréal, se situe dans le bureau du maître de port de Montréal.

Au centre de contrôle de Québec, le capitaine Robert Theriault dirige un personnel composé d'une vingtaine de contrôleurs de la circulation, lesquels assurent, 24 heures par jour, les services de liaison entre les navires et le rivage. A l'aide du radiotéléphone, de cartes marines et de tableaux de commande appropriés, on est en mesure de suivre la marche de tous les navires circulant dans le fleuve.

Natif de Shelter Bay, comté de Saguenay, le capitaine Theriault connaît fort bien tous les coins et recoins du fleuve. Avant d'assumer ses fonctions actuelles au ministère, il a servi pendant 17 années comme officier et pilote à bord des navires commerciaux naviguant dans les eaux canadiennes et particulièrement dans le fleuve Saint-Laurent.

Les contrôleurs de la circulation maritime, comme leurs collègues à la circulation aérienne, doivent subir un certain entraînement qui les prépare au rôle qu'ils sont appelés à jouer dans les services de la marine du ministère. Ainsi, on exige présentement du contrôleur une connaissance approfondie des télécommunications. Il doit également posséder un certificat en radiotéléphonie, classe 2. Pour les surveillants d'équipes, le ministère recrute des officiers de marine comptant au moins sept ans d'expérience à bord des navires.

Le service nouveau est le résultat d'études entreprises par le ministère des Transports en 1964. On avait alors formé un comité

chargé de jeter les bases d'un service de renseignements sur la circulation dans le chenal en aval de Montréal.

On se souvient qu'au cours de réunions avec les représentants d'entreprises de navigation, à Montréal, l'an dernier, le ministère a présenté des rapports périodiques sur le progrès des études en cours. Ces réunions étaient présidées par M. Gordon W. Stead, sous-ministre adjoint pour la marine.

Il y a quelques mois, l'honorable John Turner déclarait que le service de renseignements sur la circulation maritime pourrait, dans un avenir prochain, étendre ses ramifications depuis le golfe Saint-Laurent jusqu'à la tête des Grands Lacs. Là où la chose serait nécessaire, le service serait assuré avec la collaboration des autorités américaines.

Le service n'est encore qu'à ses débuts, mais il a déjà fait sa marque et il est reconnu comme l'une des plus heureuses initiatives de l'heure dans un domaine aussi important que celui de la navigation maritime.

Pilots take advantage of favorable winds and weather, and so, according to a recent finding, do the . . .

BIRDS

by W. R. Fryers

Base Meteorological Officer

Canadian Forces Base

Cold Lake, Alberta



By now, most of the readers of "The DOT" will be familiar with the new importance of bird hazards to aircraft. (See article in the issue of May-June 1964.)

With aircraft coming in bigger sizes and higher speeds every year, the hazard is growing in economic cost too. Something had to be done. Something is being done.

Behind the news stories, there is a lot of urgent action underway to find a means to 'beat the birds.' Many nations are active in this field. None more so than Canada.

All the major airlines and aeronautical organizations in Canada are co-operating in research and development schemes aimed at studying the hazard and eliminating or at least reducing it.

Under the direction of the National Research Council of Canada, which is master-minding the effort, every conceivable avenue of study is being followed, every possible scheme of counter action to cope with the bird hazard is being tried.

One of these is the scheduled forecasting of migration intensity.

Last year—1966—the forecasters of the weather office at the Canadian Forces Base at Cold Lake, Alberta, issued daily forecasts on the movements of birds known to be in the flight zone throughout the spring and fall migration seasons for the guidance of flying operations at the base. Their pioneer effort could well become a pattern for similar routine service in other countries of the world.

Why Cold Lake?

Perhaps it was the equipment of 42 Radar Squadron nearby. Perhaps it was the big stake in air safety for the low-flying CF-104's, where one big bird can bring down a \$1,500,000 plane. Perhaps it was the lively interest of the station weather office

staff in a challenge involving weather, although not in the scope of their regular duties.

Or perhaps it was because LAC Pete Desfosses broke his leg playing football in September 1965.

No longer able to function as an active weather observer, he was assigned to clerical duties in the office of the senior meteorological officer.

Pete was still on clerical duty when Dr. W. W. Gunn visited the station in October 1965.

Dr. Gunn is an ornithologist—a bird expert, that is—representing the National Research Council and the Wildlife Service of Canada, who came to present the case against birds (involved with airplanes) and the need for project support in studying the problem.

The commanding officer, Group Captain W. J. Buzza, was sympathetic. The senior meteorological officer was sympathetic, too, and he had a man to help with the job. . . LAC Pete Desfosses.

The first step was the assessment of miles of film already available, showing the hour-to-hour picture of bird activity as revealed by radar on the PPI scope. Such films had been taken at several radar sites across Canada but no system for analyzing and cataloguing them had been devised.

They were simply piling up in Dr. Gunn's basement at home, a wealth of evidence awaiting a favorable combination of circumstances to tell their story.

The circumstances turned up at Cold Lake.

A code patterned after meteorological codes was devised and tested by the Fryers/Desfosses team. Hour-by-hour analysis

began, first on work sheets, then on coded abstract sheets, and finally on punch cards.

The job grew and by the time Pete's leg was entirely healed a larger team had been assembled under his direction and put under contract as a private enterprise working outside of office hours.

The working up of final results from this vast accumulation of data has now been handed to the computers of the Meteorological Branch of the Department of Transport in Toronto.

Enough evidence on bird migration characteristics was on hand by the spring of 1966 to justify the second step of the project—the forecasting of bird activity to protect aviation.

Birds, it seems, fly the weather. That is, they use favorable winds and weather in 'flight-planning' their migrations.

Thus, there is more than a little sense in asking a weather office to predict bird movements, since the techniques for predicting bird movements turned out to be remarkably similar to the techniques used in making a weather forecast.

First, there must be a network of observing stations reporting regularly on existing conditions. This provides essential data for preparing the forecast and later for verifying it.

In the case of weather forecasts, we have a network of observing stations reporting hourly on the state of the elements.

In the case of the bird activity forecasts, the observations of bird positions are made by radar stations at regular intervals and photographed to provide a record of the PPI scope display. This information was turned over regularly to the duty forecaster at the Met. section.

Second, there must be a history of the trends and normals for each season. In the weather business, we call it 'climatology.' In the bird business, there doesn't seem to be one yet, so I would suggest one: *migreology*. (This combination word, made up from *migrate* and *ecology*, has excellent references, i.e., Latin and Greek roots.)

In any case, the short and skimpy records that we did have were very valuable for reference in deciding on seasonal normals and for timing daily peaks and minimums of bird activity.

Finally, the "bird-movement forecaster" must use all the available data and his own knowledge of basic principles to estimate trends into the future.

In the case of bird forecasts, the valid period was 24 hours, the time of issue, 10 a.m. daily.

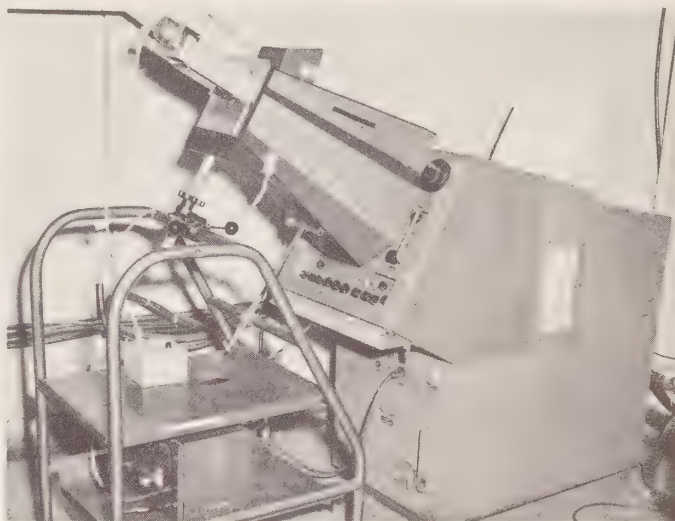
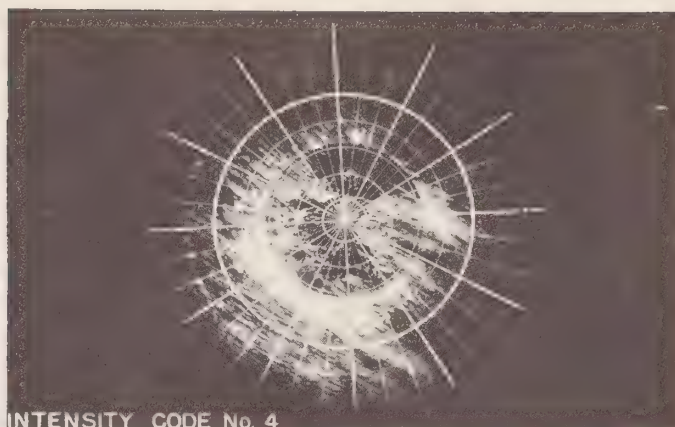
The forecast set out the anticipated intensity of bird activity for each hour, graded according to an eight-point intensity scale. Thus a forecast of Intensity Code Eight for 7 p.m. would indicate maximum bird activity and maximum hazard to aviation at that time.

Sounds relatively simple, doesn't it, It isn't really. There is a lot of art and a lot of science still to be put into it. We are just at the beginning.

As this is being written, Corporal Pete Desfosses is in Aix-en-Provence in France, comparing notes with French technicians and helping with the setup of a new radar observing facility for recording bird activity in that area.

The results will go to Brussels where a special office will soon begin to issue warnings of bird migrations for aviation in Europe.

We at Cold Lake were proud to have had a chance to help.



BIRD WATCHERS 1967—Electronic bird watchers at a Canadian Forces radar base record bird activity in the area by means of a time-lapse movie camera attached to the console of a PPI (Plan Position Indicator) scope (above). Top photo shows what the scope has seen: Bird activity, which is rated on an intensity Code scale ranging from zero to eight, was about medium at the time the picture was taken.

LES OISEAUX N'Y ÉCHAPPENT PAS—Les oiseaux, cause d'ennuis pour l'aviation dans certains secteurs du pays, sont surveillés de près à l'aide d'un radar panoramique auquel on a attaché une caméra pouvant capter leurs déplacements à intervalles réguliers. L'appareil spécial (photo ci-dessus) est installé dans un des immeubles d'un poste de radar des Forces canadiennes en Alberta. Dans la photo du haut, on voit la présence d'oiseaux captée sur l'écran de radar.

Un métier en voie de disparition connaît un regain de vie à Québec

par Edouard Deslauriers
Services d'information

Le métier de chaloupier semble en voie de disparition. Petit à petit, nos bonnes vieilles chaloupes de bois, faites à grands coups de hache dans l'épinette rouge qui peuplait jadis les forêts de l'est canadien, font place aux chaloupes d'aluminium et de fibres de verre.

Il existe encore pourtant un endroit—et c'est peut-être le seul dans les services du ministère des Transports—où l'on construit encore des chaloupes de bois selon les méthodes employées à l'époque de nos grands-pères. Ces travaux, évidemment pas à coups de hache puisqu'on dispose maintenant d'un outillage moderne à cette fin, se poursuivent dans l'atelier de l'Agence de la marine du ministère à Québec.

L'atelier de l'Agence, dont le contremaître est M. Gérard Parent, compte deux spécialistes de la construction de chaloupes, MM. Benoît Côté et José Harvey.

M. Harvey est natif de l'Île-aux-Coudres, en face de Baie St-Paul. C'est là qu'il a appris son métier alors qu'il était très jeune. Il n'avait en effet que douze ans lorsqu'il a construit sa première chaloupe.

L'Île-aux-Coudres est d'ailleurs reconnue comme l'endroit d'où provient une large part de notre main-d'œuvre spécialisée dans le domaine de la construction navale au pays à l'heure actuelle. On rapporte même que les ouvriers qui ont travaillé à la construction de la réplique du navire de Jacques Cartier, la «Grande Hermine», aux chantiers de Davie Brothers, à Lauzon, étaient, pour la plupart, de l'Île-aux-Coudres.

À l'époque où José Harvey apprenait son métier, le service de transbordeur entre l'Île-aux-Coudres et la rive nord du Saint-Laurent, à St-Joseph-de-la-Rive, n'existait pas. La chaloupe constituait donc le seul moyen de transport efficace à la portée des gens de l'île. Chacun avait sa chaloupe; c'était une nécessité.

À cette époque également, l'Île-aux-Coudres s'était taillée une réputation comme endroit de prédilection pour la culture des pommes de terre. Ce produit devait être expédié jusqu'au marché Champlain dans la basse-ville de Québec. On se servait à cette fin de goélettes construites par les habitants de l'île.

La hache était l'outil principal des chaloupiers de l'Île-aux-Coudres. Comme aujourd'hui, cependant, on s'inspirait alors d'un modèle à l'échelle qu'il fallait bâtir avec beaucoup de soins afin de donner à l'embarcation projetée l'équilibre nécessaire à son bon fonctionnement. Lorsque les plans étaient enfin dressés, la construction proprement dite dépendait largement de l'habileté du chaloupier à manier la hache. À peine âgé de 12 ans, José Harvey, nous dit-on, était un robuste gaillard qui savait donner un coup de hache avec autant de précision que les plus habitués de l'île. Sa première chaloupe, un chef-d'œuvre de l'époque, a connu une vingtaine d'années d'existence.

L'épinette rouge servait alors à la construction des chaloupes. C'est du bois qu'on trouvait en abondance dans la région immédiate. On pouvait le tailler avec aise, et sa résistance, sous bien des aspects, était comparable à celle du chêne et du pin qui servent exclusivement à la construction de chaloupes de nos jours.

Aujourd'hui, en effet, le chêne blanc est surtout utilisé dans la construction de la charpente qui comprend, dans le langage des chaloupiers, la quille, les membres, l'étrave, l'étambot et le tableau (la partie arrière). Tout le reste, soit tout ce qui sert à couvrir la charpente, est fait de pin.

Les chaloupes construites à l'Agence de Québec sont de 16 à 28 pieds de longueur. Certaines sont utilisées par les gardiens de phares et les autres sont portées à bord des brise-glace et autres navires de la Garde côtière. On s'en sert pour le transport du personnel et de certaines marchandises depuis le navire jusqu'à la rive et aussi pour effectuer des travaux dans



des endroits où les plus gros navires ne peuvent circuler sans difficulté.

MM. Harvey et Côté estiment que la construction d'une chaloupe nécessite environ trois semaines de travail. Ils disposent d'un outillage moderne qui leur permet de façonner une embarcation solide convenant aux exigences des services de la Garde côtière.

Le courbage des membres, semble-t-il, constitue la phase la plus longue et la plus exigeante des travaux en atelier. C'est qu'il faut donner aux membres la courbure qui convient exactement à la forme que doit prendre l'embarcation. Il s'agit donc d'une délicate opération qui nécessite plusieurs heures de travail. . . et de sueurs au-dessus d'une boîte à vapeur qui sert à assouplir le bois.

En dépit de la popularité grandissante des chaloupes faites de fibres de verre et d'aluminium, MM. Côté et Harvey demeurent convaincus que l'embarcation de bois conservera son utilité et sa raison d'être dans les services du ministère des Transports.

M. Harvey explique que chaque chaloupe de l'Agence de Québec est construite pour un besoin particulier. Ainsi, la maquette, ou le modèle à l'échelle, doit donc tenir compte de la nature du travail auquel l'embarcation est destinée. La chaloupe est en effet construite en fonction de l'usage qu'on se propose d'en faire. C'est dire que la construction étant entièrement faite à la main, et non en série à l'aide d'un moule applicable à toutes les embarcations, il est possible d'ajouter, au besoin, les pièces de résistance jugées nécessaires.

Ainsi donc, si la vieille chaloupe de bois jadis si populaire est en voie de disparition dans certains milieux, elle conserve une place de choix dans les services de la marine du ministère des Transports.

La construction de chaloupes de bois pour l'usage de la Garde côtière canadienne demeure en vogue à l'Agence de la marine du ministère des Transports, à Québec. On voit ici deux spécialistes de la construction de chaloupes, M. Benoît Côté, en avant, et M. José Harvey, travaillant à la charpente d'une embarcation dans l'atelier de l'Agence. A droite, on aperçoit un de leurs produits finis, une chaloupe de 16 pieds.

The construction of wooden work boats for the Canadian Coast Guard is carried on at the Department of Transport marine agency in Quebec City. Here, two specialists in the construction of the boats, Benoît Côté, right, and José Harvey, work on a boat in the agency's workshop. At right can be seen one of their finished products, a 16-foot work boat.

Indestructible Cobweb — The Red River Cart

by J. R. K. Main

This is the third in a Centennial series, written especially for "The DOT" by J. R. K. Main, a former director of civil aviation with the Department of Transport. Mr. Main's book, "Voyageurs of the Air," a history of civil aviation in Canada, is being published by the Department as a Centennial project.



The Coureurs des bois and the Voyageurs, marrying and intermingling with the Plains Indians, created over the centuries a new nation in Manitoba. They squatted and built permanent homes along the Red and Assiniboine rivers near the present city of Winnipeg.

To the Canadian officials who took over the territory, first by force of arrogance and later by force of arms, the Métis, the half-breeds, were little more than a collection of outcasts.

The Métis, on the other hand, saw themselves as a people with customs, language (French), and the social values of a nation, a concept that had been reinforced by an unofficial invitation to join the United States of America, with whose people they traded and had much closer contacts than any part of Canada.

The Métis were well adjusted to the facts of life on the prairies, one of which was the presence of millions of buffalo that provided meat for winter use and hides for clothing, leather and rawhide essential to their particular way of living.

The Indian, the nomad, could follow the

buffalo migrations, but the Métis were compelled to go after and seek out the buffalo, kill to meet their needs, and return to their fixed base in Manitoba.

This called for the invention of a vehicle to carry supplies out on the great annual buffalo hunt, where the return trip might run to as much as 2,000 miles, load haunch, hump and hides, and return with the pemmican and skins.

The answer was that magnificent adaptation to local resources and needs, the Red River cart.

The cart was constructed entirely of local materials—wood and rawhide. No iron was used.

It consisted essentially of an oblong platform about three feet wide by five feet long with the outside members extended another five feet to form shafts.

Under the centre of the platform, a stout cross-beam was fixed with the ends protruding a foot or more. The protruding ends were rounded with axe, adze (a cutting tool) and drawknife to form axles. A pin at the end of each axle held the wheels in place.



Two blocks of oak, which was plentiful in Manitoba, were bored, centre and sides, to form the hubs. The felloes (the thick rim of a wheel into which the spokes were set) had no metal tire; the joints of the felloes were held together by rawhide.

Wheels were heavily "dished" to ensure stability and the box on top of the platform consisted of a light railing supported by upright stakes.

Oxen were used as draught animals although an occasional pony or Indian "cayuse" could be put into harness. Partly for this reason, the conventional leather horse collar was fitted on horse and oxen alike.

There were no tugs or traces. Rawhide thongs, connecting the ends of the shafts to the hames (two curved pieces of wood) clasp the collar did the trick.

The harness was, of course, made of locally-tanned leather and rawhide.

Each cart had an attendant who led the ox along the trail, hobbled him at night, harnessed him and so forth. His duties also included the responsibility of repairing or even rebuilding the vehicle.

Sometimes the carts were organized into brigades of four to six with a driver for each brigade.

Every motorist knows the advantages of being able to obtain spare parts at any garage or service station. Spares for the repair of the Red River cart were available from the trees on the rim of a prairie pot-hole or along the creek or riverbed of any stream.

The carts, made in the settlement of oak and birch, had a payload of about 1,000 pounds. If the axle had to be replaced with soft and squishy poplar, the C. of A., or its equivalent, cut the load to 500 pounds or less.

In the autumn, when the great buffalo hunt trekked westward, hundreds of these vehicles lurched and bumped over the scant prairie trails. They forded streams, pitched into badger holes, and creaked over stones that would have wrecked a heavier and more rigid vehicle.

Dry wood, turning on a dry axle, screamed and wailed in an incessant ear-splitting chorus as the caravans crawled over the rolling plains.

Sporadic attempts were made to lubricate the wheels but no grease was available. That was all needed for pemmican, so a certain bovine plastic product was used when opportunity afforded.

At other times, almost anything went, even the bodies of frogs, newts and tadpoles, taken from the adjacent prairie puddles and ponds, were literally pressed into service.

And so it was on these flimsy contraptions that the commerce of this emerging nation was carried.

The Métis have long since ceased to function as a nation. They exist only as a problem to tweak the conscience of the few who remember their history. The virtual extinction of the buffalo would have destroyed their particular way of life in any event.

But the record of the Red River cart remains as mute testimony to the skill and ingenuity of these people and their amazing capacity to cope with an environment in which their European counterparts were in constant danger of starving.

Comme projet du centenaire, visitons d'abord le Canada

par Corinthe Tremblay

Des Services de l'Air, région de Montréal

Où irons-nous durant nos vacances cette année? Voilà la question que chacun se pose et qui le rend parfois un peu perplexe. Pourtant, projeter un voyage, c'est déjà une joie, et que d'endroits magnifiques à visiter dans notre beau Canada!

Pensons d'abord à l'EXPO 67. C'est là que vous constaterez comment l'imagination et l'habileté des humains ont réussi, avec des mastodontes, à transformer quelques petites îles en une Terre des hommes, une merveille mondiale.

Visitons à fond notre Belle Province. Allons à Québec, ville unique par son site pittoresque. Rendons-nous en Gaspésie et voyons le fameux Rocher Percé et le sanctuaire d'oiseaux de l'Île Bonaventure. Visitons la région du Lac St-Jean, les Cantons de l'Est, la Côte Nord où l'exploitation forestière, les mines et les projets hydrauliques de la Manic nous étonneront.

Soyons méthodiques dans nos projets de voyage. Ne commençons pas par les pays lointains en ignorant le nôtre. Le Canada est d'une telle étendue qu'il nous faudra profiter de nombreuses vacances pour en faire le tour. Au Nouveau-Brunswick, Frédéricton, sa capitale, possède un musée remarquable. A St-Jean, nous assisterons à la rencontre tumultueuse des eaux à l'embouchure de la rivière St-Jean. Passons à Moncton. Essayons la fameuse côte magnétique, et, à l'heure de la marée, regardons, étonnés, la montée vertigineuse de l'eau dans la rivière Petitcodiac. Puis, nous traversons à l'Île-du-Prince-Édouard où l'on y respire un air pur, où tout est propre et calme et où l'on se repose à souhait sur la plage de Cavendish. En visitant Charlottetown, nous y découvrirons des arbres sur lesquels sont inscrits les noms d'anciens monarques et de notre

gracieuse reine, commémorant ainsi la plantation de ces arbres

Passons ensuite en Nouvelle-Écosse, où mille surprises nous y attendent. Par exemple, nous y retraçons des faits historiques en visitant le fort Port Royal, et Grand Pré qui est demeuré un coin poétique nous parlant encore d'Évangéline.

Il ne faut pas oublier notre benjamine. . . Terre-Neuve. On se doit de lui rendre visite. D'ailleurs, l'accueil y est tellement chaleureux. De Port-aux-Basques, filez jusqu'à St-Jean sur la route no 1. Cette province est toute différente de ses sœurs à cause de son pittoresque. Elle possède des petits ports de pêche tout à fait typiques avec des noms comme L'Anse-aux-Morts, Rose Blanche, Fortune etc. Il y a aussi Corner Brook, ville industrielle située dans une baie. En résumé, il vaut certes la peine de faire le tour de cette province. On conservera du voyage un souvenir impérissable.

Passons ensuite en Ontario. Arrêtons-nous d'abord dans la Capitale fédérale et visitons la fameuse bibliothèque et le Parlement; assistons à la relève de la garde et admirons les superbes tulipes aux mille couleurs. Et puis, voyons la Ville-Reine, ses parcs magnifiques et l'Université. Toronto est vraiment une ville culturelle malgré sa réputation de ville d'affaires. Il faut enfin à tout prix contempler les fameuses chutes Niagara et ne pas manquer le spectacle éblouissant des jeux de lumière en soirée.

Tournons maintenant nos regards vers l'ouest canadien. C'est là qu'on y découvre la nature dans toute sa splendeur. Quel coloris! . . . Les immenses prairies avec leurs blés d'or bercés par le vent. . . Si l'on est amateur de photographie, on est servi à souhait. L'on voudra revoir sur film ce magnifique coucher de soleil dans les prairies, les pics splendides qui entourent le Lac Louise et enfin cette faune heureuse d'être libre. Sur la route de Banff à Jasper, des orignaux, des ours croiseront votre route et vous serez fascinés par tout ce qui vous entoure. Le glacier Colombia nous rappelle que l'âge des glaces n'est pas d'un passé si lointain. Nous pouvons même y faire une petite promenade en auto-neige. Et puis, rendons-nous aux confins ouest de notre pays, à Victoria, la belle capitale fleurie où, à courte distance, vous y découvrirez le petit «paradis terrestre» qu'on a surnommé Butchart Gardens. A Vancouver, il y a des arbres gigantesques, des plages sablonneuses et un port d'une activité fébrile.

Il est tellement immense notre beau pays! Il faudra naturellement le visiter par étapes. Profitons donc de nos vacances annuelles et peu importe les déboursés. Nous les avons bien gagnés ces jours de détente. Allons. . . Visitons cette année une partie du Canada. Nous aurons, de cette façon, contribué au succès même des fêtes du centenaire de la Confédération. Après avoir constaté comment nos frères des autres provinces nous auront bien accueillis, nous dirons alors avec fierté: «Je suis Canadien; je fais partie de cette immense famille dont les membres sont étroitement liés «a mari usque ad mare». Nos pères ont eu raison d'avoir uni sous un même drapeau tous ces territoires. Ne chantons pas seulement: «O Canada, terre de nos aïeux» mais aussi: «O Canada, mon pays mes amours». . .



SEE CANADA FIRST—Montreal, host city to Expo 67, is one reason why Corinthe Tremblay, a D.O.T. air services employee in Canada's largest city, suggests that all Canadians see Canada this summer as their Centennial project.

VOYONS LE CANADA D'ABORD—Cette vue de Montréal, la nuit, constitue par elle-même une invitation à visiter la métropole canadienne, capitale du monde à l'occasion de l'Expo 67. C'est sans doute une des raisons qui ont incité Mme Corinthe Tremblay, des Services de l'Air du ministère des Transports, à Montréal, à inviter ses concitoyens à visiter d'abord leur pays, cet été, comme projet du centenaire.



a model of inspiration

To many people in the Great Lakes area, the Coast Guard Cutter *Relay* is a familiar sight, but to George Wilson, a D.O.T. radio inspector in Toronto, it became an inspiration.

The result was a working scale model of the *Relay* which delighted crowds of youngsters at the annual boat show in Toronto earlier this year and continues to delight its owner, now putting it through open water trials near his Scarborough home.

"I began model building by constructing manufacturer's boat kits," recalled Mr. Wilson, who has been building radio-controlled ship models as a hobby since 1960. "I soon discovered, however, that the kits lacked a great deal so I decided to break away from this type of construction and begin scale building using actual ship drawings."

Mr. Wilson obtained detailed D.O.T. drawings of the hull and superstructure for the "R" class Search and Rescue cutters which he used as a constant source of reference while the *Relay* was under construction.

"I chose to call the model *Relay* because she is seen quite often in this area when on patrol in the Great Lakes during the summer months," he added.

Mr. Wilson's model was built from keel to masthead along the same lines as the *Relay*, her keel cut from 1/4-inch solid birch, her bulkheads cut from 1/8-inch birch plywood.

The model is driven by twin motors geared to a 2-1 ratio,

giving a shaft speed of 3,000 r.p.m. to 1 1/2-inch, three-blade propellers.

Its speed is controlled forward and reverse by a transistorized speed control, allowing the model to be operated at speeds ranging from dead slow to full speed forward and reverse.

The steering is accomplished by the use of a transistorized servo-mechanism as is the direction of the forward main deck fire monitors.

Water is pumped to the monitors from the underside of the hull by means of a "Rube Goldberg" type idea, using an automobile windshield washer pump for water supply with the two monitors adjusted to spray about 30 inches from the model.

The model is built to a scale of 1/2 inch to a foot and is 48 inches in length, 10 1/2 inches in breadth and results in a displacement of 15 1/2 lbs.

Did it take him long to build it?

"To complete the model to the extent you see it has taken me approximately 1,200 hours," said Mr. Wilson, who first joined the D.O.T. as a radio operator in 1950. "To complete the deck, superstructure, flying bridge navigation equipment and mast detail will probably require another 200 to 300 hours' work."

Does he plan to build other models of the ships with the familiar red hulls and white superstructure?

"As soon as I finish this one, I'll be writing the D.O.T.'s marine section for another set of plans," he replied.

new d.o.t. course to meet demand for radio operators

A new course has been added at the Department of Transport's Air Services School in Ottawa.

Designed to meet the Department's need for certified radio operators, the course has graduated its first class of 19 students and has three other classes totalling 90 students underway.

A unique feature is that it presents for the first time an opportunity for high school graduates to enter the Department directly and be trained with pay for a career in radio communications.

No longer does a young man have to spend one or two years at his own expense obtaining equivalent qualifications.

"We need 130 radio operators a year just to keep up with the demand," said A. A. Johnson, superintendent of the Air Services School.

The demand is high, he explained, because of the expanding needs of Canada's mushrooming air and water transport industry, in addition to the normal vacancies caused by promotion, retirement and resignation.

"To get 130 operators a year, we're attempting to recruit a class of 30 students to start the course every two months," Mr. Johnson said.

The course has been set up to provide operators for 163 D.O.T. radio stations across Canada which provide radio aids to marine and air navigation.

The stations range from bases at Montreal and Gander, which employ as many as 35 operators, to northern and coastal stations, some of which employ as few as two men.

The course is taught by six radio operator instructors and two meteorological instructors (at some stations, the operator is required to take weather observations).

Studies, consisting of roughly 50 per cent theoretical lectures and 50 per cent operational practice in carefully-simulated environments, are taught in three phases.

The first phase, basic electronics, also includes typing and Morse code. The second phase, meteorology, takes in instruction similar to that given weather observers. In the third phase, marine and aeradio operations, the students are instructed in radio aids to marine and air navigation.

The school where the course is taught (a modern brick building at 100 Dufferin Road in Ottawa which was converted for D.O.T. use) is equipped with an outside weather observation area, a teletype room with 16 machines, a typing and Morse code room and two operations rooms in which marine and air operations are simulated.

With a continuing drive for recruits, the Department is confident that it can meet the need for qualified radio operators.

"I think we were fairly successful with the first class, said R. H. Bulbrook, the senior instructor of the course. "Of course, we're learning, too, and find that we're having more success with each new class."

The students, at present recruited by the D.O.T. from high schools in six regions across Canada, are paid \$250 a month while in training and advance to \$397 monthly on successful completion of the eight-month course and four months probation at operational stations.

Once the students graduate, they are posted to stations across Canada ranging from Fort Smith, Northwest Territories, to Grindstone in the Magdalen Islands.



FIVE NEW OPERATORS—Among the first 19 graduates of the D.O.T.'s new course for radio operators were, left to right, R. E. Gilroy, Burnaby, B.C., Eric Lange, Langley, B.C., and R. D. Thompson, Donald Mah and H. F. Wehner, all of Vancouver.

NOUVEAUX OPÉRATEURS RADIO—Ces cinq opérateurs radio figurent au nombre des 19 premiers diplômés de la nouvelle école de formation d'opérateurs radio du ministère des Transports. On remarque, de gauche à droite, R. E. Gilroy, de Burnaby (C.-B.); Eric Lange, de Langley (C.-B.), et R. D. Thompson, Donald Mah et H. F. Wehner, tous de Vancouver.

Le «J. E. Bernier» joint la flotte de la Garde côtière canadienne

Le brise-glace-baliseur «J. E. Bernier», lancé des chantiers navals de Davie Shipbuilding Limited, à Lauzon (P.Q.), en avril dernier, est sur le point de joindre la flotte de la Garde côtière canadienne.

C'est Mme Jean Marchand, épouse du ministre de la Main-d'œuvre et de l'Immigration, qui est la marraine du navire portant le nom du célèbre navigateur canadien qui, de 1906 à 1911, a exploré les régions les plus reculées dans l'ouest de l'extrême Arctique. Le capitaine Bernier a revendiqué les îles de l'archipel Arctique au nom du gouvernement canadien, et des équipes d'arpenteurs à bord de son navire ont exploré de vastes étendues du Nord.

Construit au coût de \$5,266,786, le «J. E. Bernier» aura pour principale fonction de ravitailler les phares et de s'occuper des bouées dans le fleuve et le golfe Saint-Laurent. Il s'adonnera également à des travaux de déglacage pendant les mois d'hiver, et, en été, il participera aux opérations de ravitaillement des postes de l'Arctique.

D'une longueur hors tout de 231 pieds, le «J. E. Bernier» a deux hélices dont les moteurs sont alimentés par des groupes électrogènes (diesel).

Il est doté d'un pont d'envol ainsi que d'un hangar télescopique abritant un hélicoptère qui servira à la reconnaissance des glaces et au transport de marchandises légères entre le navire et la terre.

Le pont des bouées mesure 70 pieds de longueur. Il est muni d'un mât de charge d'une puissance de 20 et de 10 tonnes. Quatre autres mâts de charge sont d'une puissance de trois tonnes.

L'appareil à gouverner est du type électro-hydraulique à pales tournantes. Les deux machines principales et l'appareil à gouverner sont commandés de la passerelle. Le navire est muni des plus récents types d'appareils électroniques de navigation et de radiocommunication. On a installé à bord, comme mesure de prévention de la pollution de l'eau, un système interne de traitement des égouts par aérobies.



Le n.g.c.c. «J. E. Bernier» est towé dans le Saint-Laurent quelques minutes après son lancement des chantiers de Davie Shipbuilding, à Lauzon (P.Q.), le 28 avril 1967.

CCGS J. E. Bernier is towed out into the St. Lawrence River only minutes after her launching at Lauzon, Que.

CCGS J. E. Bernier Launched at Lauzon

CCGS J. E. Bernier, latest addition to the D.O.T. fleet, was formally launched last April 28 from the St. Lawrence River shipyards of Davie Shipbuilding Limited at Lauzon, Que.

The Bernier, an icebreaking supply and buoy-laying vessel, was christened by Mrs. Jean Marchand, wife of Manpower and Immigration Minister Jean Marchand. Also on hand was Transport Minister J. W. Pickersgill.

The ship was named after J. E. Bernier, the renowned Canadian mariner who probed the westernmost regions of the Arctic between 1906 and 1911 and laid claim to the islands of the Arctic Archipelago in the name of the Government of Canada.

Built at a contract cost of \$5,266,786, the Bernier is expected to go into service this summer, working in the St. Lawrence and the Gulf of St. Lawrence on lighthouse supply and buoy-tending duties.

She will also perform icebreaking duties in the winter months and may be used in support of summer resupply operations in the Arctic.

The new ship is 231 feet long and is equipped with twin-screw diesel electric power.

It will be equipped with a flight deck with a telescopic hangar to house a helicopter for ice reconnaissance and ship-to-shore light freight operation.

It will also have a buoy deck 70 feet long, fitted with one boom having lifts of 20 tons and 10 tons, and four booms with three-ton lifts.

Three holds are provided for general cargo and refrigerated cargo and one hold for either cargo or water ballast.

Personnel accommodation will be of a high standard, with special attention given to air conditioning, ventilation and insulation to provide comfortable living conditions for a complement of 59 men.

Accommodation is also being provided for officer cadets from the Canadian Coast Guard College, who will be on board in the course of their training.

daughters delight d.o.t. dads



Jo Ann Carmichael



Nan McDougal

The recent victory of 15-year-old Jo Ann Carmichael in the annual University of Ottawa High School Debating Tournament almost came as no surprise to her father.

For J. I. Carmichael, director of management services for the Department of Transport, is one of four fathers—three of them D.O.T. personnel and the fourth a member of the Air Transport Board—who has had a daughter reach the tournament's finals in the past five years.

"As you can imagine, we're four proud fathers," commented Mr. Carmichael when asked about Jo Ann's win and the unusual coincidence.

The other three fathers are D. A. McDougal, Executive Assistant to the Deputy Minister of Transport, whose daughter Nan was chosen best speaker in 1963, J. E. Devine, Chief of General Administration, whose daughter Pamela was a runner-up in 1962, and F. J. Altimas, Chief of the Audit Division of the ATB, whose daughter Ann was on the winning team in 1962.

Jo Ann, who won the 1967 debating trophy together with a girl classmate from Ottawa's St. Joseph's High School, triumphed over teams from 22 other area high schools.

The win gave triple cause for celebration since, in addition to winning, it was the first time St. Joseph's had made the finals as well as the first time that two of its teams were chosen to debate against each other for the trophy.

The girls won debating the affirmative of the resolution "that education should be primarily a federal rather than a provincial responsibility."

In the final debate, the negative team (two boys from St. Joseph's) said federal control of education would be unconstitutional under the British North America Act.

They argued that a federal "set-up" would be undemocratic and could be used as a propaganda machine.

The girls, on the other hand, said that federal control would co-ordinate educational standards and curricula and provide a more equitable distribution of federal aid to education.

They also argued that the "compromises" worked out in 1867 were not adequate for today's educational needs.

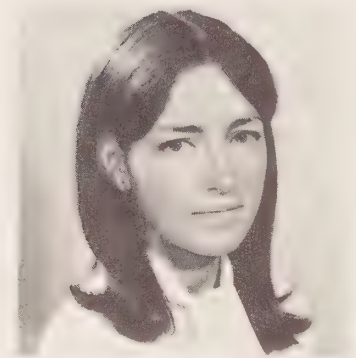
"We were delighted with her victory," said Mr. Carmichael, who added that Jo Ann, a winner in a 1966 competition sponsored by Ontario Hydro, hopes to continue her public speaking.

And the other speakers?

Nan McDougal, who went on to graduate from Ontario Teachers' College, is now married and living in Toronto where she is a primary school teacher, reports Mr. McDougal.

Pam Devine, a U. of O. grad, plans to return to university this fall to study law, says her dad.

And Ann Altimas is an information officer with the Centennial Commission, reports Mr. Altimas, an equally proud papa.



Pam Devine



Ann Altimas

MET. Employee Paid \$170 for Suggestion



S. D. Wood

A Montreal employee has been awarded \$170 for a suggestion that resulted in a large saving for the Department of Transport.

S. D. Wood, a communicator with the Central Analysis Office of the Met. Branch at Montreal Airport, suggested that one of the office's teletype circuits be eliminated since its information was available almost simultaneously on other circuits.

The saving on the rental of equipment and the purchasing of paper for the machine amounted to \$1,700 a year.

In other awards announced recently, 33 D.O.T. employees have been presented with a total of \$790.

They include the following:

NAME	POSITION	LOCATION	VALUE OF AWARD
Edward Gardner	Fireman	Gander, Nfld.	\$70
J. A. Cormier	Technician	College Bridge, N.B.	50
B. W. Deitz	Elec/Tech.	Sudbury, Ont.	50
Rene Belanger	Tech/Officer	Ottawa	40
M. H. Gill	Technician	St. Lawrence, Nfld.	40
I. E. Goulden	Technician	Weston, Ont.	40
L. P. Croft	Clerk	Moncton	30
John Hanch	R/Operator	Bull Harbour, B.C.	30
L. C. Howard	Lockmaster	Beaverton, Ont.	30
A. B. Jones	Elec/Tech.	Saskatoon	30
James Rhodes	R/Operator	Smithers, B.C.	30
J. E. Summers	R/Operator	Abbotsford, B.C.	30
J. Beattie	M/Supervisor	Victoria	25
L. A. Jackson	Storesman	Toronto	25
M. R. Pope	R/Operator	Bull Harbour, B.C.	25
F. W. Tobey	Carpenter	Peterborough, Ont.	25
Herbert Sinclair	Radio Regs.	Vancouver	20
Thomas Landry	Mechanic	Moncton	15
J. C. Mondou	Elec/Tech.	Quebec, P.Q.	15
T. R. Overton	Met./Tech.	Fort Simpson, N.W.T.	15
Miss J. T. Proceviat	Expeditor	Winnipeg	15
H. F. Stewart	F/Officer	Moncton	15
J. H. Whiteside	R/Inspector	Kelowna, B.C.	15
G. J. Arsenault	Elec/Tech.	Frobisher Bay	10
John Corbett	Fireman	St. John's Nfld.	10
Mrs. A. Di Giuseppe	Clerk	Ottawa	10
R. Y. Drouin	R/Operator	Vancouver	10
John Furlong	Fireman	St. John's Nfld.	10
D. B. Hirst	R/Operator	Vancouver	10
Nelson Lane	Fireman	St. John's, Nfld.	10
Walter Morgan	Fireman	St. John's, Nfld.	10
W. M. Park	Technician	London, Ont.	10
Colin Pike	Fireman	St. John's, Nfld.	10

RETIREMENTS



"Scotty" Rawlings

"Scotty" Rawlings, one of the most popular employees ever to have worked in Ottawa's Number Three Temporary Building, has retired after 24 years of government service.

More than 150 fellow employees turned out last April 17 to say goodbye to Mrs. Rawlings at a staff farewell.

There, she was presented with a television set, a \$100 purse, a photo album filled with pictures of those she worked with, a perpetual pass to a fictitious parking space near the building and a card signed by 450 staff members.

Later, 41 women co-workers took her to lunch where she was presented with a Bulova watch.

A high point of the farewell was a speech by H. C. McCauly, chief of management support for the Construction Engineering and Architectural Branch, who said in part:

"Perpetuated in Departmental records is the name Euphemia Rawlings, born in Glasgow, Scotland, on a date that was somewhat earlier than the always youthful Mrs. Rawlings was for some time prepared to admit.

"Perpetuated in records is also the nature of her work, which on analysis can be converted into cold statistics that might show that Mrs. Rawlings, during her 20 years in the Branch, handed out 72,000 salary cheques, filed something close to half a million pieces of paper, walked 35,000 miles doing messages and carried an incalculable tonnage of files and papers.

"But we are not here to talk about the cold statistics of Euphemia Rawlings. We are here to honor a very warm and loveable person known, not only throughout this Department, but in countless other areas of the service and indeed far beyond as simply "Scotty."

Charles F. Hunt

Charles F. Hunt, officer in charge of the Aviation Forecast Office for Squadron VU-33 at Victoria Airport, has retired after 24 years service with the Meteorological Branch.

Mr. Hunt, who once taught school in Saskatchewan for 13 years, joined the Met. Branch after graduating from Queen's University in 1942.

He served as a meteorological officer at Centralia, Lethbridge and Regina before moving to the Pacific coast.

In addition to serving eight years as officer in charge at VU-33, he spent two years as OIC at the Maritime Headquarters Forecast Office where he was staff officer, weather, to the flag officer, Pacific coast, and the maritime commander, Pacific.

"Charlie" and his wife Gladys were honored at a retirement party attended by his many friends.

The couple now live in Sidney, B.C., where they plan to "do a bit of gardening and a bit of fishing."



David Bell

David Bell, one of Ontario's best known air engineers, has retired as regional air-worthiness inspector at Toronto after 20 years of D.O.T. service.

Mr. and Mrs. Bell were guests of honor at a testimonial dinner held at the Skyline Hotel in Toronto last March 7, by 260 of their friends in aviation.

R. W. Goodwin, director of civil aviation, presented Mr. Bell with a silver tray and W. M. McLeish, D.O.T.'s chief aeronautical engineer, replaced Mr. Bell's original air engineer's licence, which he had held prior to joining the Department, with a new D.O.T. 'M' licence.

Mr. Bell came to Canada from Scotland in 1926 and took a job with the Royal Canadian Air Force at Camp Borden, Ont., where he worked for two years.

He later joined the Toronto Flying Club and served 11 years as chief engineer before moving to Fleet Aircraft Ltd. as chief inspector for the Fort Erie aircraft manufacturer during the Second World War.

He joined the Department of Transport in December 1946.

Miss A. M. Macdonald

Miss A. M. Macdonald, senior clerk in the Toronto Radio Regulations Regional Office, has retired after 35 years of service.

A native of Ontario, Miss Macdonald began her D.O.T. career in November 1931 at the Toronto office where she served continuously until her retirement.

She came to the Department from the Bell Telephone Company where she had been employed for two years. Prior to that, she had been a school teacher.

Among her major responsibilities in the Toronto office was the checking and distribution of radio licences for the region, a considerable undertaking since the area contains about two-thirds of Canada's population.

Miss Macdonald was honored at a luncheon arranged by the lady members of the staff and later feted at a more formal "do" in the office.

Gifts included an electric broom and a gift of money in addition to the many cards and notes from regional and field office personnel.



CROSS CANADA DATELINE

NEARING COMPLETION—With construction of the new \$25,000,000 terminal building at Vancouver International Airport virtually complete, workmen are turning their attention this summer to the paving and development of runways, aircraft aprons, entrance roads, car parking areas and lighting facilities. The terminal, which is expected to be operational early next year, is the last major project in a 10-year Department of Transport development plan.

AÉROGARE DE VANCOUVER—On a pratiquement terminé la construction de la nouvelle aérogare de \$25,000,000 à l'aéroport international de Vancouver. Au cours des mois d'été, on s'adonne maintenant à l'asphaltage des pistes ainsi qu'à l'aménagement des voies d'accès et des aires de stationnement. On effectue également les travaux en vue de l'éclairage des pistes. L'aérogare, qui sera ouverte au public voyageur au début de l'an prochain, constitue le dernier projet d'envergure entrepris dans le cadre du programme décennal de développement du ministère des Transports.

FOR DISTINGUISHED SERVICE

Ottawa—The Patterson Medal for distinguished service to Canadian meteorology has been presented to Clarence Boughner, chief of climatology with the Meteorological Branch in Toronto.

The award, named after Dr. John Patterson, a former director of the Met. Branch from 1929 to 1946, was presented to Mr. Boughner by J. R. H. Noble, director of the branch, at the first annual

congress of the Canadian Meteorological Society.

The society, of which Dr. Allen Brewer of the University of Toronto is president, held its three-day congress May 24-25-26 at Carleton University in Ottawa.

Among a large number of papers presented was one on the World Weather Watch, delivered by Mr. Noble.

About 100 meteorological delegates attended the sessions.

We Aim to Please

Victoria—Larry Slaght, district marine agent at Victoria, received a very down-to-earth request recently.

It came from Trevor Anderson, head keeper on barren Race Rocks lightstation, located in the Strait of Juan de Fuca, who said he felt homesick every time he looked out the window of his house.

"Please send me some dirt," asked Mr. Anderson in one of the most unusual requests ever to confront a marine agent.

No one in Victoria had ever filled such an order but there was nothing in the books to say that Mr. Anderson wasn't entitled to his fair share of mother earth.

So off went 50 yards of the stuff on the D.O.T. supply ship Estevan.

Mr. Anderson is now using his new-found treasure to create a lawn and vegetable garden on the station, where he shares lightkeeping duties with assistant Kurt Cehack and their two families.

"Like most government departments, we believe in a bit of landscaping," commented Mr. Slaght. "We have no plans however to do the same at all our stations."



Left to right, Dr. Allen Brewer, Mr. Boughner and J. R. H. Noble.

Promotion

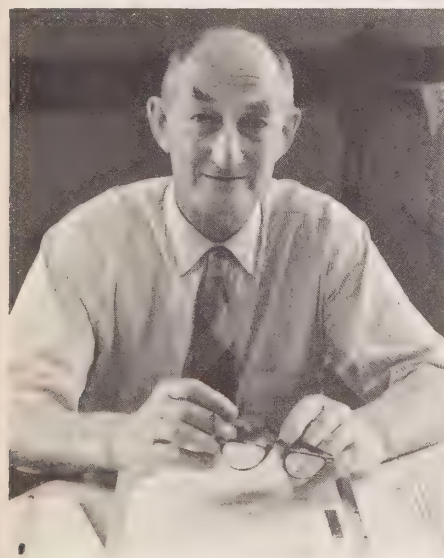
Captain E. O. Ormsby has been appointed district marine agent at Dartmouth, after serving two years as head of the Saint John marine agency.

Capt. Ormsby will replace F. M. Weston of Dartmouth, who is now regional director of marine services for the Maritime area.

Prior to his Saint John posting in April, 1965, Capt. Ormsby was head of the Prince Rupert marine agency.

Born in Ireland in 1908, he is a veteran of service with both the Royal Canadian Air Force and the Royal Canadian Navy.

He joined the Department of Transport in 1950 as marine sub-agent at Port Arthur. Ten years later, he was appointed district marine agent at Prince Rupert.



E. O. Ormsby

Promotion

Le capitaine E. O. Ormsby a été nommé agent régional de la marine à Dartmouth, après avoir dirigé durant deux ans l'agence de la marine de Saint-Jean (N.-B.).

Il remplacera à ce poste M. F. M. Weston, de Dartmouth, qui occupe maintenant le poste de directeur régional des services de la marine pour les Maritimes.

Avant d'être affecté à Saint-Jean en avril 1965, le capitaine Ormsby dirigeait l'agence de la marine de Prince Rupert.

Né en Irlande en 1908, il a fait partie de l'Aviation royale du Canada et de la Marine royale du Canada.

Il est entré au service du ministère des Transports en 1950 à titre de sous-agent de la marine à Port Arthur. Dix ans plus tard, il était nommé agent régional de la marine à Prince Rupert.

Cadets commended

Sydney, N.S.—Two cadets and the purser of the Canadian Coast Guard College at Point Edward, N.S., have been commended for their prompt action in fighting a fire which broke out in a cleaning closet of the college's Simcoe Building.

Cadet F. W. Guse, Cadet M. D. Moody, and Purser Yves Roberge were personally commended by Captain Gerard Brie, director of the college, for their part in extinguishing the blaze, apparently caused by a piece of cloth left on a steam radiator.

The fire was discovered about 8.50 p.m. by Cadet Moody who immediately alerted Mr. Roberge, the duty officer at the time.

In the meantime, Cadet Guse ran to the site of the fire and began fighting it with a carbon dioxide extinguisher.

After notifying the fire department, Roberge and Moody returned and, together with Guse, managed to put the fire out before firemen arrived.

Hommage au mérite

Sydney, N.-E.—Deux élèves-officiers et le commissaire du Collège de la Garde côtière canadienne, à Sydney, en Nouvelle-Ecosse, ont été particulièrement félicités pour la présence d'esprit et le sang-froid qu'ils ont déployés, récemment, en maîtrisant un début d'incendie au collège. Les flammes avaient éclaté dans une pièce renfermant les articles servant au nettoyage et à l'entretien de l'édifice Simcoe.

Le capitaine Gérard Brie, directeur du Collège, a fait l'éloge des élèves-officiers F. W. Guse et M. D. Moody et du commissaire Yves Roberge qui ont maîtrisé l'incendie apparemment causé par du linge oublié sur un calorifère.

Le début d'incendie a été découvert vers 8 h. 50 en soirée par l'élève-officier Moody qui a immédiatement alerté le commissaire Roberge.

Pendant ce temps, l'élève-officier Guse est arrivé sur les lieux et a commencé à arroser les flammes à l'aide d'un extincteur chimique. Après avoir prévenu le service des incendies, MM. Moody et Roberge sont venus prêter main-forte à Guse. A l'arrivée des pompiers, le feu était déjà éteint.

New Post

Vancouver—W. A. Blacklock, formerly director of personnel services at D.O.T. headquarters in Ottawa, has taken up his new position here as regional manager of airports and properties.

Mr. Blacklock's position is a new one, created as a result of the growing importance of airport operation and the increasing volume of passenger traffic moving through D.O.T. airports in B.C.

Born and raised in Sioux Lookout, Ont., a major centre of busy flying in the 1930's,

Mr. Blacklock acquired an early interest in aviation and the allied fields of communications and meteorology.

In 1951, he was appointed administration officer for the Toronto air services region and in 1957, he was made chief personnel administrator for air services in Ottawa.

Un passe-temps pas comme les autres

Marius Proulx, membre d'équipage du n.g.c.c. "Simon Fraser", dont le port d'attache est situé à l'agence de la marine du ministère des Transports à Québec, s'adonne à un passe-temps qui lui permet de mettre ses talents créateurs à l'épreuve. Marius consacre presque toutes ses heures de loisir à la construction de pieds de lampe et d'abat-jour à l'aide de centaines de bâtonnets de crème à la glace. Cette photo de l'artiste au travail nous fait voir également une de ses œuvres, un pied de lampe construit à l'aide de 500 bâtonnets. M. Proulx est marié et père de quatre enfants.



Marius Proulx

Coast Guard Hobbyist

A busy member of the crew of CCGS *Simon Fraser*, which is based at the D.O.T.'s Quebec City marine agency, is Seaman Marius Proulx, who is married and the father of four children. Using hundreds of popsicle sticks obtained ashore and plenty of patience, Mr. Proulx designs and builds unusual lamp stands at night or during off-duty hours. The lamp stand shown in the photograph was built from 500 popsicle sticks in 12 hours.

Canadian Coast Guard **A L B U M** de la Garde côtière



The CCGS "Gannet" is a northern supply vessel based at the Department of Transport marine agency at Dartmouth, N.S.

CCGS "GANNET"

LENGTH: 225 feet
BREADTH: 38 feet
DRAFT: 3 feet
POWER: Diesel, 1,000 S.H.P.
GROSS TONNAGE: 1,083 tons

Le n.g.c.c. «Gannet», navire de ravitaillement du nord, a son port d'attache à l'Agence de la marine du ministère des Transports à Dartmouth, N.-É.

LE N.G.C.C. «GANNET»

LONGUEUR: 225 pieds
LARGEUR: 38 pieds
TIRANT D'EAU: 3 pieds
PUISSANCE: Diesel, 1,000 cva
JAUGE BRUTE: 1,083 tonneaux

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SEPTEMBER-OCTOBER 1967
SEPTEMBRE-OCTOBRE 1967



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COVER

Fireworks exploding over a gleaming CCGS *Alexander Henry*, tied up at the town dock at Parry Sound, Ont., during Coast Guard Day there last July 1, provided a focal point for celebrations in the Great Lakes port that marked Canada's auspicious entry into her second century of history. Also held this year at Victoria, B.C., Saint John, N.B., and Dartmouth, N.S., the Coast Guard celebrations drew large crowds of visitors. (See story on page 4).

FRONTISPICE

Le tir des feux d'artifice dont l'éblouissement embrase le n.g.c.c. *Alexander Henry*, amarré au quai de la ville de Parry Sound (Ont.) lors de la Journée de la Garde côtière, le 1^{er} juillet dernier, a été le point culminant des manifestations qui eurent lieu dans ce port des Grands lacs pour célébrer sous d'heureux auspices l'entrée du Canada dans le deuxième siècle de son histoire. Les manifestations de la Garde côtière qui se sont également déroulées cette année à Victoria (C.-B.), Saint-Jean (N.-B.) et Dartmouth (N.-É.), ont attiré un flot considérable de visiteurs.

Editor Bryan Goodyer

Rédacteur français Édouard Deslauriers

THE DOT is a staff magazine published by the Information Services Division of the Department of Transport, Government of Canada, under the authority of the Minister, Hon. J. W. Pickersgill.

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Help Yourself!

Contributions to the United Appeal are not merely donations to charity, but may be an investment in one's own future and that of his family.

Who knows when he will need a blood transfusion, who can say that he will never require the assistance of the Canadian National Institute for the Blind, the Victorian Order of Nurses or the convalescent and therapy facilities offered by any one of a dozen other agencies.

Even with grants from all levels of government and much volunteer assistance, additional money must be obtained to cover operating costs and purchase modern equipment.

Children and young people of all classes of society are served by the Scouts, Guides, boys' and girls' clubs and the Y's.

Research into both causes and treatment of the numerous crippling diseases, as well as services to those afflicted, are dependent in a large measure on the respective societies.

These include the Arthritis and Rheumatism Society, the Multiple Sclerosis Society and the organizations devoted to the retarded and those suffering from mental illness.

All benefit from the peace of mind resulting from the care and attention given children in homes and day nurseries and the elderly in residences or clubs.

All of these institutions look to the United Appeal for money to continue their good work, all of them are waiting for your donation to the United Appeal.

Please do not disappoint them!

Un bon placement

Les dons à la Fédération des œuvres ne constituent pas de simples dons aux œuvres de bienfaisance: ils représentent un placement pour notre avenir et celui de notre famille.

Qui sait quand on aura besoin d'une transfusion de sang, qui peut affirmer qu'on n'aura jamais besoin de l'aide de l'Institut national canadien pour les aveugles, de l'Ordre des infirmières Victoria ni des services de thérapie ou de convalescence assurés par d'autres organismes de la Fédération.

L'apport de subventions des diverses administrations gouvernementales et l'aide de nombreux bénévoles ne suffisent pas. D'autres fonds sont nécessaires pour combler les frais d'exploitation et faire l'acquisition de matériel moderne.

Les enfants et les adolescents de toutes les couches de la société bénéficient des services du scoutisme et du guidisme, des groupements de garçons et de filles et des différentes œuvres de jeunesse.

Les divers organismes—Société canadienne de l'arthrite et du rhumatisme, Société canadienne de la sclérose en plaques et associations s'occupant des arriérés et des personnes atteintes de maladies mentales—effectuent des recherches sur les causes et le traitement des nombreuses maladies causant l'invalidité et assurent dans une grande mesure des services aux invalides.

Nous avons tous l'esprit tranquille à la pensée que les enfants dans les foyers adoptifs et les garderies et les personnes âgées dans les foyers ou les clubs reçoivent les soins et l'attention dont ils ont besoin.

Tous ces organismes comptent sur la Fédération des œuvres pour obtenir les fonds leur permettant de poursuivre leur bon travail et sur les dons que vous ferez à la Fédération.

Ne les décevez pas!



COMMUNICATIONS

Modern discussions about management in large and complex organizations emphasize the need for good communications. What this really means is that employees need to keep others informed about what they are doing and why they are doing it. This process of information is required not only inside the department but in connection with the public as well. Those who work at headquarters are familiar with the importance of this process because of our responsibilities in providing information to Parliament, whether to individual members or to committees. While at times this may seem to take a large amount of time, in fact it is not just a duty; it is a valuable function because de-

partmental decisions and programmes are helped rather than hindered by avoiding unnecessary secrecy.

In the same sense, activities like public Coast Guard days, organized school tours of airports and similar projects are another valuable aspect of communications which help to explain what we are trying to do to serve Canada.

Finally, there is the important field of communications within the department. With continuing growth, we must keep our fellow employees as fully informed as we can in regard to the development of our programmes, our decisions and the reasons behind these decisions. This applies not just to those above us but to those around us who work with us or for us.

LES COMMUNICATIONS

De nos jours, dans les études qui ont cours sur la gestion d'entreprises vastes et complexes, on insiste sur la nécessité de bonnes communications, ce qui revient à dire que les employés doivent tenir les autres au courant de la nature et de l'objet de leur activité. Ce mécanisme d'information doit non seulement exister au sein du Ministère mais s'étendre au grand public. Les fonctionnaires de l'Administration centrale en connaissent toute l'importance, car il leur incombe de renseigner les députés ou les comités du Parlement. Cette tâche qui, parfois peut absorber beaucoup de leur temps est des plus utiles; de fait, toute discrétion inutile, loin de faciliter les décisions et les programmes que le Ministère doit prendre ou mettre en œuvre, serait préjudiciable.

Dans le même ordre d'idées, la poursuite d'activités comme l'organisation de journées de la Garde côtière, ou de visites d'aéroports par les écoliers constitue une autre utilisation avantageuse des communications et met en relief le travail que nous accomplissons pour servir le pays.

Il y a enfin l'important secteur des communications au sein de notre ministère, en pleine expansion. Nous devons renseigner nos collègues dans toute la mesure du possible sur la réalisation de nos programmes, sur nos décisions et sur les raisons qui les motivent. Ces renseignements doivent s'adresser non seulement à nos supérieurs, mais aussi à nos compagnons de travail et à nos collaborateurs.

Deputy Minister

Sous-ministre



A big day in Victoria

coast guard days
draw thousands
to d.o.t. displays



Crowds inspect ships in Parry Sound



Dartmouth display prior to opening

COAST GUARD DAYS, during which the general public was invited to visit Department of Transport marine facilities and "meet the fleet", have been held at Victoria, B.C., Dartmouth, N.S., Saint John, N.B. and Parry Sound, Ont. so far this year as part of the department's special Centennial Year activities.

For thousands of Canadians, it was their first chance to learn of the work done in the various agency shops and to go aboard icebreakers, lighthouse and buoy-tending vessels and other Coast Guard ships.

In addition to having "open house" in the shore establishments and aboard the ships, all four agencies featured special displays of marine equipment, aids to navigation and of buoy laying and marine firefighting. Photographic exhibits also portrayed the work of the department's Marine Services from coast to coast.

Victoria

The Coast Guard Day program at Victoria was the most elaborate, with all Victoria-based Coast Guard vessels on hand to participate in a sail-past that, as the local press put it, "out-drew Swiftsure", one of the city's traditional summer marine racing events. Thousands of persons lined the seashore off the Dallas Road waterfront while the agency's vessels passed by and their helicopters performed up and down the waterfront.

Heading the fleet was CCGS *Vancouver*, just back from her first period of duty "on station" at Weather Station Papa in mid-Pacific. Astern of her in line came her sister ship *Quadra*, which will be completing her trials in the next few weeks, followed by the icebreaker CCGS *Camsell*, the lighthouse and buoy tenders *Estevan* and *Sir James Douglas* and the 95-foot search and rescue cutters *Racer* and *Ready*.

When the ships had completed the sail-past, the buoy-tending

vessels gave a demonstration of buoy handling and the cutters quickly extinguished a blaze aboard a "fishing boat", actually a hulk that had been towed out to the demonstration area and had been well loaded with inflammable material to ensure a spectacular fire.

The helicopters showed their versatility of action and exhibited their capability in carrying cargo loads in sling hanging below them.

The sail-past and demonstrations took place in the morning. In the afternoon, CCGS *Vancouver* and CCGS *Quadra* were tied up at a wharf at the old navy graving dock. Throughout the remainder of the "open house", crowds made their way through the vessels, visiting in particular the excellent hydrographic and oceanographic displays and seeing the arrays of special electronic equipment in the meteorological and telecommunications section of the ships. The other vessels were tied up at the district marine agency wharves by the Johnston Street bridge and were visited by a steady stream of Victoria district residents.



Many toured Thomas Carleton in Saint John

The agency buildings and yard area displays proved interesting to the crowds and agency staff members were kept busy answering questions concerning the ships and their duties.

Saint John

Four blasts of an Air-chime horn signalled the opening of Coast Guard Day at the marine services base, Saint John, N.B., on June 24. Coast Guard Day here formed a part of the city's observance of Champlain Day. Open house was observed and the agency's shops building as well as the Coast Guard vessels *Walter E. Foster* and *Thomas Carleton* were open to the public.

At 2.30 p.m. the ship's personnel of the *Walter E. Foster* gave a buoy-changing demonstration. During this well-attended exhibit of typical agency work, the largest type buoy weighing about 6½ tons, was lifted from the water onto the deck. Then the complete procedure involved in servicing this large aid to navigation was shown.

At 3.30 p.m. the agency's Bell helicopter, its float equipped for landing on ground or on the water, showed the pilot's skill in taking off from the flight deck of the *Thomas Carleton* and landing again a number of times on the small platform. During the 2½ hours of "Open House" an estimated 2,000 visitors walked through the shops, inspected the variety of buoys on the pier, and went aboard the vessels.

T. J. Stephen, acting district marine agent, was in charge of co-ordination and arrangements assisted by all his staff. Capt. R. D. Shiels, superintendent of lights, looked after the displays and co-ordinated the arrangements for "Open House" aboard the vessels and for the helicopter activities. L. E. Murphy, personnel officer, prepared the information pamphlets which were distributed to the visitors.

Capt. B. E. Denton and Capt. A. D. Croft played host to the public in their respective vessels, *CCGS Walter E. Foster* and *CCGS Thomas Carleton*.

Four blasts of the Air-chime horn signalled the close of Coast Guard Day activities.

Dartmouth

At Dartmouth marine agency, crowds of Halifax and Dartmouth residents viewed the displays in the agency shops and visited five of the agency's vessels that were tied up along the agency wharves. Open to the public were the search and rescue cutter *Rapid*, the ice-reinforced depot ship buoy tender *Narwhal*, *CCGS C. D. Howe*, the "passenger ship of the Arctic"; the light

icebreaker *CCGS Sir William Alexander* and the lighthouse and buoy tending vessel *CCGS Edward Cornwallis*.

Parents and children happily toured the shops and ships asking questions, watching the winking and blinking displays of buoys and beacons, testing the ear-shattering voice of the big fog horns, clanging buoy bells in the yard and exploring the insides of the freshly-painted ships. As at past Coast Guard Days, free ice cream for the children proved to be an excellent attendance-booster.

During the day a demonstration of the S-62 helicopter was given, showing its capabilities in search and rescue work. The "chopper" left the agency, swung out over the harbour, lowered a rubber boat and two crewmen. The men effected "repairs" on a buoy, then were picked up and taken away in the helicopter.

A firefighting demonstration was given by the crew of *CCGS Rapid*, an old fishing boat being set alight and the blaze quickly extinguished.

Parry Sound

A torchlight parade that ended in a fireworks display at the town dock and two days of "Open House" highlighted the Coast Guard Day celebrations at Parry Sound.

"This has been without a doubt the best Coast Guard Day we've ever had," commented F. K. (Dick) McKean, district marine agent at Parry Sound for the past 19 years.

In rolling out the red carpet for its public, the Parry Sound agency opened *CCGS Alexander Henry* and *CCGS C. P. Edwards*, took visitors on a scenic tour of the harbour area aboard the agency vessel *Parry Sound* and open its doors to a host of visitors and Dominion Day tourists.

Biggest attraction of the day, however, turned out to be the agency's helicopter, which thrilled a youthful crowd of enthusiasts that lined up for hours for the chance to get a ride over the area.

But the smiles of the younger set were outdone by those of the agency staff who enthusiastically explained the mysteries of their well-displayed equipment and proudly watched visitors poke and peek into every corner of the gleaming red and white ships.

Among special guests at the two-day event was Mayor George Saad of Parry Sound, who helped set off some of the fireworks as part of his mayoralty duties.

Mr. McKean and his staff also took advantage of the occasion to hold a small reception during which J. B. Tait, superintendent of office services, was presented with his 25-year service award by Mrs. Joan Maughan, chairman of the Parry Sound Centennial Committee.



Boat rides proved popular

a once-in-a-lifetime trip

A childhood dream came true last June 22, when CCGS *Tupper*, a light icebreaker and lighthouse supply ship, sailed from Charlottetown, P.E.I., bound for Montreal and Expo 67.

Aboard the ship were 10 underprivileged children and a matron, selected by members of the Provincial Command of the Royal Canadian Legion after they learned that children from local orphanages, unlike many school children making sponsored trips to Expo, would have no chance to see the world's fair.

A Centennial project was born and with the co-operation of the Canadian Coast Guard, arrangements were made for the trip aboard the *Tupper*, which was being taken out of regular service to make an official visit to Expo as part of the department's Centennial Program.

After a three-day voyage to Montreal, the children spent a never-to-be-forgotten week at the big fair, then made the return trip to Charlottetown, arriving home July 5.

On their return, James W. Walker, chief radio officer aboard the *Tupper*, told us about it:

"All the youngsters enjoyed the voyage very much," Mr. Walker said, "and all the very best fatherly attributes were shown by the entire crew."

Mr. Walker said the crew members took up a collection among themselves so the children would have "that much extra spending money at Expo," provided entertainment on the ship itself and escorted their adopted family and chaperone on the forays into the exciting world of Expo 67.

"On the return voyage," said Mr. Walker, "there was some time to spare and the children were asked to write an essay on their trip."

Below, unedited, one of them tells what it's like to make a once-in-a-lifetime trip:

Our Trip to Expo

by CHARMAYNE MACINNIS

It started out like a fairy story, it was so hard to believe. One day a few weeks ago, I heard that six of us older children would be going to Expo on the Canadian Coast Guard Ship *Tupper*, with four other children. Well you can't imagine how excited I was, the thought of going to Expo. This was a place I had only dreamed about.

We left Charlottetown on the twenty second of June. Oh, all the excitement; reporters taking our pictures and everyone shouting good-by. Our dream had come true.

The Chief Mate, James Hall, showed us around the ship. He said to "kill our curiosity" on what made the boat "tick". But, I think he was pretty excited himself. He was a terrible tease. He told us that we'd be green by tomorrow and that it would be terribly rocky. We believed him but, we were not sick. We had a wonderful time, no time on our hands to get sick really.

We arrived at Quebec City early in the morning. Chateau Frontenac was beautiful, so high up in the cliffs. The Plains of Abraham, changing of the guard with Batisse II, their mascot marching with them and a tour of the Citadel, where we saw the late General Vanier's Grave. These were only a few things we saw there. Not to mention the parade, beatnik street, the long narrow streets and ancient buildings.

We left Quebec for Montreal. The scenery along the way was first beautiful, it made you proud to be a Canadian. The crew lent us their glasses so that we could see the streets and parks of



All aboard for Expo

the towns and cities we passed. Montreal finally beamed in front of us, the large bridge, large smoking ships, tall buildings and Expo!

We docked right at Expo, we were terribly excited and went ashore that evening, again with Sparky (Mr. Walker), Mrs. Henry (the chaperone) and George Gaudet (an engineering officer). We went to La Ronde, then later to the Tattoo. This show was really terrific and the colors shown were beautiful.

The next day we went to the pavilions and saw wonderful Works of Man. The British, American, India, Canada and the Theme pavilions were only a few we saw. La Ronde and the Youth Pavilions were simply out of this world.

Wednesday of our stay at Expo we all went for a Helicopter spin. A couple of the kids stayed longer because they went for gas at the airport. They not only saw Expo from the air but also Montreal.

Mr. MacIssac (the Bo'sun) took us all to see the dancing waters, fireworks, the log chopping contest and tree climbing contests. We had a wonderful time and would love to do it again.

Alas, our stay at Expo had to end. As "Our ship" as it came to be known moved slowly out of the Harbour. We were all a little sad to leave Expo. But we were still on the boat and still had three more days to have a wonderful time.

On our trip back a few funny instances occurred and I will also mention a few that happened earlier and some were not at the time so funny. First one of the girls put the iron in the wrong plug and we lost the iron. (Ed. note: Most of the electrical outlets aboard the ship are direct current at 230 volts.) Then another girl put the hairdryer into the wrong plug and we lost the hair-dryer. All went well for awhile and while Mrs. Henry was telling one of the girls what a perfectly behaved group of children she had when a life-saver went sailing by and into the river. One boy was curious and had pulled the pin that connected the buoy. We are all wondering now what will happen next. Probably sink the boat.

We are now out in the Gulf of St. Lawrence. We saw whales, a porpoise and other things swimming by the boat. Sparky suggested to us to write an essay so we are all doing one. I don't think they will be as good as we really can do, since we're beginning to think about being seasick. I feel the ship rising and falling. I wonder if when you are seasick does the world seem to spin around, does your stomach seem a bit "restless?"

I don't think I can write any more. I think I better lay down . . . I got it!

airport firefighters train to meet any emergency

Whoomph!

The gasoline-fed flames were shooting hundreds of feet into the air as the airport emergency crew moved into position.

The first truck to reach the fire area discharged a dry chemical cloud onto the flames to draw heat from the blazing inferno.

At the same time, a squad of rescue firemen wearing protective clothing fought through the acrid black smoke, entered the "craft" and rescued all 10 "passengers" as a 10,000-gallon-a-minute storm of snowy foam covered the area like a blizzard.

The fire was out in 30 seconds and all 10 "passengers" had been rescued.

Drama in real life?

No. The passengers are dummies, the craft is a 75-foot mockup of a commercial airliner.

The "disaster" is an exercise that's part of the Crash Fire Rescue Training Course held several times each year at major airports across Canada.

The 10-day seminar, designed to train new recruits and keep existing crews up to date on the latest techniques in handling any conceivable type of emergency that could occur at any of Canada's airports, also consists of extensive study, lectures and films, in addition to the practical demonstrations.

At a course held in Halifax recently, the firefighters used 900 gallons of gasoline in an exercise in which they extinguished the fire surrounding a mockup in less than a minute.

"They set fire to enough gasoline to drive a car from Halifax to Vancouver and back seven times," said one observer, "and they used enough foam in extinguishing it to lather the beards of all the men in Halifax for a year."

"They'll know exactly what to do if they ever have to, though," he added seriously, "although everyone hopes they'll never see that day."



Firemen swing into action

Safety is a prime consideration in D.O.T. operations and nowhere are the staff more aware of it than in the Emergency Services and Requirements section of Air Services which had seven of its installations win honors in the 1966 annual Government of Canada Fire Prevention Contest.

The responsibility for conducting the Crash Fire Rescue Training courses in each of Air Services' six regions is the duty of the regional supervisor, assisted by the airport emergency services officer. The number of courses held in a region during the year depends on training needs.

In addition to the continuing "on site training" which is carried out at each air-

port, the aim is to have every newly-appointed firefighter on a 10-day regional course during his probationary period and once every five years thereafter.

The program is not only tailored for the regular or professional firefighters employed at the major airports but is flexible enough to include the volunteer firemen who assist regular firefighters at the larger airports and also man the crash rescue vehicles at smaller airfields.

The practical part of the 10-day course, which consists of 50 large-scale fires, is held at a major airport in each region equipped with a fire training area measuring 400 feet by 400 feet with a simulated air-



Foam blizzard fights fire

craft mockup eight feet in diameter and 75 feet in length. The training area is constructed in such a way that the fuel spilled during training can be controlled to simulate realistic conditions.

Each course is attended by 10 or 12 regular or volunteer firefighters. The instructional staff usually includes the regional supervisor, emergency services, and/or the airport emergency services officer, the fire chief from the airport where the course is held and one or more fire chiefs from other airports in the region.

Courses commence with vehicle familiarization and "dry runs" using only water in the foam vehicle extinguishing system and no fire.

Next comes the "hot drill" training which is really the heart of the course where firemen train in extinguishing gasoline spill fires of anything from 200 to 1,000 gallons, conducting the aircraft mockup search under emergency conditions and rescuing the "dummy" passengers.

Those taking the course are trained in all conceivable aircraft crash fire situations and are rotated through all positions on the emergency team, from foam truck driver, foam turret operator, foam hand-line operator, rescue man, water nurse truck operator and dry chemical rescue truck operator.

The amount of training material used on each course varies but is usually about 29,000 gallons of gasoline, 3,000 gallons of foam liquid concentrate and 16,000 pounds on dry chemicals.

Each exercise is fully discussed in a critique before proceeding to the next exercise. A full critique is held at the end of the course and a report is made on each student and added to his personal file at regional and Ottawa headquarters.



Rescue men enter mockup



It's all over

centennial salute

A Centennial project that followed in the tradition of Arctic exploration was carried out this summer by the cadets of the Canadian Coast Guard College.

The project, the erection of twin cairns, one in the Arctic and the other on the college's campus at Point Edward, N.S., was proposed by the Centennial Committee of the Cadets' Council.

Given the blessing of the college's director, Captain Gerard Brie, the plans were endorsed by A. H. G. Storrs, the D.O.T.'s director of marine operations, and Gordon W. Stead, assistant deputy minister, marine.

In each of the cairns, the cadets buried an air tight box containing a Canadian flag, a Canadian Coast Guard jack, a college crest, a Centennial emblem, a copy of the Canadian Coast Guard story, a list of all Canadian Coast Guard vessels, a number of pictures of the fleet and the college, and a dedication

message from Governor General Roland Michener which is reproduced here.

The students built the Arctic cairn during a summer trip into northern waters aboard CCGS *Labrador* made by 16 second year navigating cadets.

The campus cairn is a stone monument with a plaque commemorating the establishment of its twin in the Arctic, complete with its position and date of dedication and leaving instructions for the box at the college to be opened at the end of Canada's second century.

In a report to Capt. Brie outlining the project, the cadet committee said in part: "We believe that this project would leave a symbol of Confederation for future generations to admire and would constantly remind us of this historic event, Confederation."



GOVERNMENT HOUSE OTTAWA

Greeting to those of the future who open this cairn erected by the Cadets of the Canadian Coast Guard College.

On behalf of all Canadians of today (1967) I offer good wishes and a few thoughts which fill our minds at this important moment in our history.

We rejoice that Canada is at present, and will long remain, a country of challenging opportunity where people may live and labour in freedom, and dream and plan for the future with hopefulness and trust in our institutions and our Creator.

We are proud, too, of the many origins, cultures, traditions and religious faiths which we share with each other. This diversity gives us a sense of the brotherhood of all men. It presses us all to seek that mutual respect and comprehension which lead to harmony and unity. In so doing, we are led to think not only of the welfare of our fellow Canadians, but of the wellbeing of all peoples, so that we may act within the family of nations with generosity and compassion, and with an appreciation of the interdependence of all mankind.

You of the future will be our judges as you will also be charged with carrying on our task. All good wishes to you.

Roland Michener

June 1967.



salut au centenaire

Un projet du centenaire s'inspirant de la tradition établie dans les explorations de l'Arctique a été conçu par les élèves-officiers du Collège de la Garde côtière canadienne.

Il s'agira d'ériger des cairns jumeaux, l'un dans l'Arctique et l'autre sur l'emplacement du collège, à Sydney, Nouvelle-Écosse. Le projet, approuvé par le conseil étudiant du collège, a reçu l'encouragement du directeur de l'institution, le capitaine Gérard Brie, du directeur des opérations de la marine du ministère des Transports, M. A. H. G. Storrs, et du sous-ministre adjoint pour la marine, M. Gordon W. Stead.

Dans chaque cairn, les élèves-officiers se proposent de déposer une boîte hermétiquement fermée contenant le drapeau canadien, le pavillon de la Garde côtière, l'écusson du collège, l'emblème du centenaire, un exemplaire de l'historique de la Garde côtière canadienne, ainsi qu'une liste des noms de navires de la Garde côtière, un certain nombre de photos portant sur les opérations

de la flotte du ministère et sur la vie au collège et un message du Gouverneur général Roland Michener reproduit ailleurs dans cette page.

Les étudiants se proposent d'ériger leur cairn dans l'Arctique au cours d'une expédition projetée par les élèves-officiers de deuxième année durant les mois d'été.

Le cairn, sur l'emplacement du collège, sera construit de pierres. Sur une plaque fixée au monument on indiquera l'emplacement du cairn dans l'Arctique, la date de sa construction ainsi que des directives précisant que la boîte située à l'intérieur ne doit être ouverte qu'à la fin du deuxième centenaire de la Confédération canadienne.

Dans un rapport soumis au capitaine Brie, le Conseil étudiant souligne: «Nous croyons que ce projet servira de symbole suscitant l'admiration des générations futures et nous rappelant constamment cet événement historique, la Confédération.»



RÉSIDENCE DU GOUVERNEUR GÉNÉRAL OTTAWA

A ceux qui, à l'avenir, ouvriront ce cairn érigé par les élèves-officiers du Collège de la Garde côtière canadienne, Salut!

Au nom de tous les Canadiens d'aujourd'hui (1967), je veux offrir mes meilleurs vœux et exprimer quelques pensées qui nous viennent à l'esprit en ce moment important de notre histoire.

Nous nous réjouissons de ce que le Canada soit actuellement et demeurera longtemps un pays d'avenir prometteur dont les habitants peuvent vivre et travailler en liberté, rêver à l'avenir et le préparer avec espoir et confiance en nos institutions et en notre Créateur.

Nous sommes fiers également des nombreuses origines, cultures, traditions et croyances religieuses que nous partageons. Cette diversité nous fait prendre conscience de la fraternité de tous les hommes. Elle nous encourage à rechercher la compréhension et le respect mutuels qui font naître l'harmonie et l'unité. Nous sommes ainsi portés à songer non seulement au bien-être de nos concitoyens, mais aussi à celui de tous les peuples, de manière que notre action au sein de la famille des nations soit empreinte de générosité et de sympathie et tienne compte de l'interdépendance de tous les groupes humains.

Vous de l'avenir serez nos juges tout comme vous serez chargés de poursuivre notre tâche. Nos meilleurs vœux vous accompagnent.

Roland Michener

Juin 1967



the travois

by J. R. K. Main



In the conclusion of a Centennial series written especially for "The DOT," Mr. Main, a former director of civil aviation, talks about the method used by the Plains Indians to move their goods and how the coming of the Canadian Pacific Railway signalled the start of a new era in transportation in Canada.

The American Indian never discovered or invented the wheel. Until the advent of the white man, his domestic animals were few, the dog in all tribes and the llama in Peru. Both were pressed into service.

The llama served among other things as a pack animal, and the dog in the hands of the Plains Indians was, for long generations, made to haul a device constructed of two long poles to which a couple of crossbars were bound by thongs.

The poles, at the thin end, were crossed over the dog's shoulders and bound to his neck. The crossbars, at the heavy ends of the poles, dragged along the ground and

carried the family possessions.

The shape of the device naturally impelled the *coureurs de bois* to describe it as a *travois*.

Before we place the Indian too far down the social scale because of the primitive nature of this vehicle, it should be mentioned that, until fairly recently, a device not far removed from the travois was in common use in many parts of Ireland.

Called a *slip-car*, it consisted of a cart body without wheel or axle to which runners were fixed on the trailing ends of the shafts.

A horse, ox or donkey hauled the slip-car along rough trails that would, in any event, have made the use of a wheel difficult. But the Irishman did not use the shafts to support his teepee as the Indian did.

The possession of the horse by the Plains Indians about the middle of the 18th Century added greatly to their mobility just at the time when the need for mobility was greatest.

The eastern Indian tribes had villages



Ken Man

and fixed dwellings to which they resorted during the winter.

There, as trappers, they traded skins for food at the trading posts and sometimes during the summer, when hunting was poor, practiced a primitive agriculture that provided durable food.

Their western kinsmen could rely on none of these. The Plains Indian never fully graduated from a hunter to a trapper, partly because there were few fur-bearing animals in his environment, but mainly because the buffalo met all his needs.

The prairie tribes had always moved with the buffalo migrations. Now, in addition, they were frequently compelled to shift their hunting grounds under the pressure of the tribes from the east who, in turn, were being displaced as the white man pressed them toward the Rockies. High mobility was needed.

The horse that the Plains Indians acquired was a tough, intelligent little beast even better adapted to prairie life than the Indian himself.

The horse's ancestors had, for tens of thousands of years, scampered over the steppes of Central Asia under conditions almost identical with those prevailing on the prairies.

He had escaped from the Spanish Conquistadors and gone wild in the New World with the result that he gave only grudging allegiance to man; the hobble and the picket-rope kept him in bondage.

In size, he had degenerated from the specialized European breeds from which he sprang, but constitutionally, the *cayuse* combined the toughness of rawhide with the agility of a cat.

Moving day came frequently to these Indians, imposing a heavy burden upon the squaws who bore the brunt of the exercise.

The skins or cloth comprising the teepee were wrapped around spare clothing, and sleeping robes, cooking utensils and other incidental possessions would be stuffed inside or hung on any convenient protuberance on the travois onto which the family possessions were piled and lashed.

Prominent among the utensils was a big black round-bottomed pot, studded with four short spoked legs—a small edition of the boiler traditionally used by cannibals to cook missionaries.

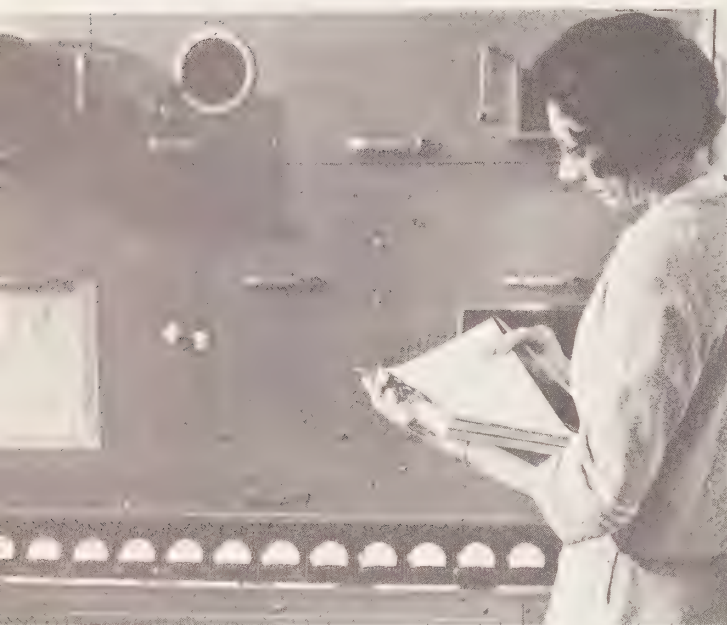
As each group finished packing, it streamed off across the prairie, creaking and jangling, toward the new encampment, with the squaws sometimes riding but more often leading the burdened *cayuse*.

One inestimable advantage the travois enjoyed over later and more elegant vehicles was that it never stripped a gear or had a flat. In fact, it never broke down. It was a simple and effective device, well suited to the needs of those highly nomadic people.

But it did not measure up to the changing times.

The collapse of the Riel Rebellion of 1885 stemmed, not from the fighting qualities of the Metis and the Indians, who were fully as good as the Canadian militia, but from the superiority of the Canadian Pacific Railway over the travois and the Red River cart.

eavesdropping on silence



Norine follows the ionoscope's operations and "scales" the film it takes.



Norine Allen of Ottawa listens to what cannot be heard, at a distance of from 55 to 250 miles. Give up?

She is Canada's only female in a small group of Telecommunications and Electronics Branch technicians who take soundings of the ionosphere, a layer of ionized particles which blanket the earth and, among other things, permit long-distance radio broadcasts.

Knowledge of conditions current in the ionosphere is important for the efficient operation of communications with ships, aircraft, lighthouses—with all of which D.O.T. has responsibilities—and, indeed, almost every kind of radio communication.

This strange, invisible sphere is in a state of continual change. In sunlight it gradually spreads into three layers—the inner one about 55 miles high, the outer extending to some 250 miles. As night falls, the upper and lower strata gradually converge until a single layer results. Sun spots, among other factors, have a marked effect on the behaviour of the ionosphere.

Radio waves, generally, are deflected from the ionosphere back down to earth, thus enabling a radio message to travel as far as 2,000 miles or more. Much depends on the wavelength, however, for under certain circumstances some frequencies are absorbed into the ionosphere wholly or partially, resulting in a weak signal or none at all.

This is where Norine and her ionosonde come in. Every 15 minutes the ionosonde, like 50 others in various parts of the world, sends a series of electronic pulses straight into the ionosphere. The electronic "echoes" are recorded on film which, when developed, Norine puts in a projector to "scale", taking off certain information to put on a graph and code into digital form. The information includes the height of the ionosphere and its reaction to different electronic frequencies. Analysis of such specific properties of the ionosphere, as reported by an extensive network of ionosondes, permits forecasts of conditions for a week or 10 days. This enables short-wave stations to choose, from among the frequencies allotted to them, the ones which will get the best bounce, or "skip", from the ionized ceiling.

The Department maintains five "sounding" stations. Located at approximately 47 degrees of latitude are Kenora, Ottawa and St. John's, Newfoundland. Kenora also is in line perpendicularly with stations at Resolute and Churchill, on the ninety-fifth meridian.

Norine and other technicians of the Ottawa Station which is under the administration of Ottawa Telecommunications Area Manager and is part of Toronto Region's Maintenance and Operations Division, Telecommunications and Electronics Branch, have a unique double responsibility.

Results are sent to the maintenance and operations division branch headquarters, which sends daily reports to Fort Belvoir, Virginia, the world warning centre for geophysical phenomena. Reports also are sent to the centre of the American ionospheric group at Boulder, Colorado.

Like most of this select group of technicians, Norine has had extensive radio experience. She first worked for D.O.T. in 1944 at the Winnipeg monitoring station. This was followed by three years as a radio operator for the Canadian army.

Next came permanent employment as wife of Warrant Officer Ted Allen of the Royal Canadian Corps of Signals which has involved over two years at Yellowknife, N.W.T., and postings to Edmonton and Ottawa. They have two children—Patricia, 18, and Garth, 10.

In Edmonton Norine went back to radio work, serving the Department of National Defence's Northwest Territories and Yukon radio system. She rejoined D.O.T. about a year ago.

bouncy boat-buggy takes bows in bog

by Ken Parks

Information Services Division



Marshes are breeders of some strange denizens, but none of the weird and wonderful products of Pogo's Okeefenokee Swamp is any more unlikely in appearance than the motorized "crittur" that clammers, flounders, swims and crawls across the tidal flats at Vancouver's International Airport.

There, as an answer to the question of how to get to any aircraft that "ditches" off Runways No. 8 and 12, is the new "swamp buggy" with which trained crews from the airport can wade in where angels probably would fear to tread.

For years the airport has been vexed with the problem of getting aid to any aircraft that might end up on the mud flats. The airport itself is only a few feet above sea level and, extending out a matter of miles from the airport edge is a shallow-water area where, at low tide, a gooey, wasteland of weedy bog is exposed and, at high tide, there is not enough water to float a motorboat of any size. Too thick to swim in, and too thin to walk upon, as they say.

The Canadian Coast Guard's Victoria-based search and rescue ships were brought into the act when the Transport Department began a study of the problem of performing rescue work on the muddy acreage. The 95-foot cutters had to stay miles offshore at low tide and could do little better when the water was at its deepest. The small patrol launches could get in fairly close but were still far from the shore when they could sink their propellers in mud.

The department finally decided to test a "swamp tractor", a Bombardier vehicle combining the capabilities of a tractor and a boat.

An ungainly machine, looking like a cross between an army tank and a railway hopper car, it was found to be capable of crashing its way across the swamp's litter of waterlogged logs and other debris thrown ashore by the sea. It could climb up

and down the mud banks, cross water-filled holes in the bog and waddle right out into the water. Once afloat, its twin propellers sent it plowing along at a steady six knots.

At the time of writing, the "swamp buggy" had not been called into action to cope with any major air mishaps, but its crew was well equipped and well trained to cope with whatever might face them.

The "buggy" has an overall length of 17 feet and width of 10 feet. It is built with a number of water-tight compartments to safeguard its floating ability. The flat deck area has room for around 20 persons in the event of a rescue. In the centre of the deck is the raised engine and driving well, in which the driver is seated at his controls.

It has a 190-horsepower motor driving rubber-belted tracks with steel cross-link tracks. The tracks provide locomotion until the vehicle is afloat, when the propellers are brought into play.

The "buggy" is well equipped to cope with air crash circumstances. It carries four 20-man inflatable rubber dinghies which provide additional rescue vehicles, and can be towed by the Bombardier. It has a good supply of first aid needs, blankets and forcible entry tools such as a power saw and portable generator, as well as fire extinguishers and 20 lifejackets.

In addition, it has radio equipment for contact with the airport and a loud hailer for use in directing operations at a crash scene. A portable "A" frame and a fixed hydraulic winch of five ton capacity are also mounted on the vehicle, along with 200 feet of steel cable, for use when lifting or hauling tasks arise. The vehicle, fully loaded weighs about four tons.

It is manned by specially trained operators, two on each work shift at the Emergency Services Fire Hall at Vancouver Airport. The four crews are G. Blunderfield and A. Neidig; J. Martineau and R. Morison; D. Curtis and R. Bond, and W. Brown and C. Dobirstein.

LE MODELEUR, c'est un artiste

par Edouard Deslauriers
Services d'information

Le modelleur dans une entreprise quelconque n'est pas un homme de métier au sens strict du mot, dont le travail peut être comparé, par exemple, à celui d'un électricien, d'un plombier ou même d'un menuisier. Le métier y est certes pour quelque chose, mais le travail est plutôt artistique et il requiert de celui qui s'y adonne des aptitudes spéciales pour le dessin et un grand souci du détail et de la perfection.

Charles-Edouard Simard, de l'Agence de la marine du ministère des Transports à Québec, est un de ces artistes, et comme bien d'autres de sa trempe—les sculpteurs et les peintres par exemple—il tend plutôt à s'effacer et à éviter toute publicité. Il est bien évident pourtant qu'il chérit son travail et qu'il en tire les plus grandes satisfactions personnelles, mais à celui qui veut l'interviewer, il peut paraître froid, récalcitrant même, et donner l'impression d'un homme méfiant qui ne veut, sous aucun prétexte, révéler les secrets de son art.

Récemment, nous avons tout de même eu l'occasion de nous entretenir assez longuement avec M. Simard, qui est à l'emploi du ministère depuis 1949. Au début, il a paru surpris de l'intérêt qu'on apportait à son travail. L'on sentait qu'il aurait voulu qu'on abandonne toute idée d'écrire sur le sujet. Petit à petit, cependant, il s'est ouvert et nous a enfin confié quelques détails qui nous permettent de mieux connaître Charles-Edouard Simard et son œuvre.

Avant de passer au ministère des Transports, M. Simard était à l'emploi des chantiers navals de Davie, à Lauzon. Depuis son arrivée au ministère, il a fabriqué une foule de modèles, dont les mieux connus sont ceux de certains phares, comme par exemple ceux du haut-fond Prince, de l'Île Blanche, de Banc-Brûlé et de la Pointe de l'est sur l'île d'Anticosti.

Ses modèles, au cours des dernières années, ont fait l'objet de diverses expositions dans la région de Québec, particulièrement à l'occasion des «Journées de la Garde côtière canadienne». Outre les phares, sa collection comprend des modèles d'amers, de bouées et enfin de toutes sortes d'aides à la navigation. Une de ses maquettes nous fait voir l'emplacement occupé par l'Agence de la marine à Québec. Elle renferme toutes les constructions situées sur l'emplacement, et chacune y est reproduite à l'échelle.

Natif de Rivière-du-Loup, M. Simard a été initié bien jeune aux choses de la mécanique et de la construction. Son père était électricien, et il n'y a pas de doute que son influence a servi à développer chez le fils un goût prononcé pour le travail manuel.

Cependant, comme bien d'autres jeunes de son âge dans cette coquette ville sise sur la rive du Saint-Laurent, Charles-Edouard rêvait de devenir un jour matelot et de faire carrière à bord des majestueux navires qu'il voyait au large, remontant le fleuve à destination de Québec et de Montréal.

S'il devait, comme son père, devenir électricien, il avait décidé, en son for intérieur, que ce serait sur un navire ou dans un chantier maritime qu'il pratiquerait son métier. Il ne se résignerait pas à gagner sa vie ailleurs que là où il serait constamment en contact avec la vie maritime.

Peu à peu, ses goûts pour la mécanique, la sculpture et le travail du bois en général l'ont enfin conduit à l'École technique de Québec, où, en 1940, il décrochait son diplôme de modelleur.

Aujourd'hui, M. Simard, marié et père de trois enfants, voit les rêves de son enfance tout à fait comblés. Certes, il n'est pas matelot, mais son travail l'oblige quand même à voyager fréquemment à bord des navires du ministère. En plus d'être modelleur, il se voit en effet confier la surveillance des travaux maritimes de l'Agence de Québec. Ainsi, par exemple, il doit passer de longs mois sur les chantiers de construction de phares. Dans plusieurs cas d'ailleurs, on s'est inspiré de ses modèles dans la construction de ces phares.

M. Simard fabrique ses modèles dans l'atelier de l'Agence à Québec. Il y passe des journées entières, et parfois il poursuit son travail jusque tard dans la soirée. Pour lui, c'est un passe-temps qui le passionne énormément.

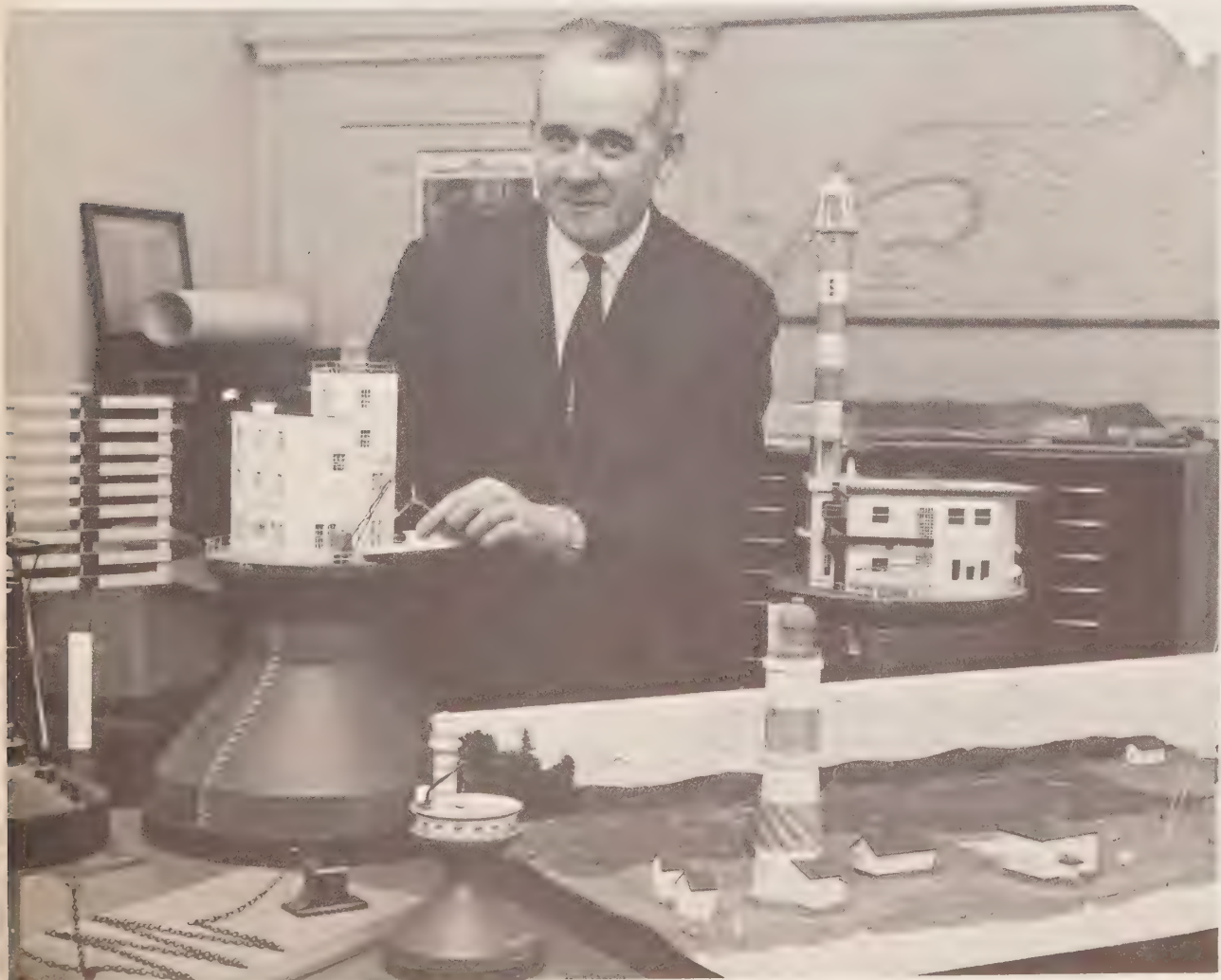
Il construit à l'échelle chacun de ses modèles. C'est dire qu'il doit consacrer plusieurs heures à la planche à dessin avant de mettre en marche l'alésoir, la perceuse, la scie, le tour à bois et les autres outils du métier.

Charles-Edouard Simard trouve dans son travail un magnifique débouché pour son esprit créateur. C'est un peu sa façon à lui d'exprimer son attachement à tout ce qui évoque la vie en mer.



Charles-Édouard Simard est photographié au travail dans l'atelier de l'Agence de la marine du ministère des Transports, à Québec. Il est en train de tailler une pièce de bois qui servira à la construction d'un modèle de phare.

Charles-Édouard Simard, modelleur du ministère des Transports, fait voir dans cette photo quelques-uns des modèles qu'il a fabriqués à l'Agence de la marine, à Québec. Ces modèles représentent, entre autres, les phares du haut-fond Prince, de l'île Blanche et de Banc-Brûlé. La maquette, en avant, à droite, renferme les diverses installations du ministère sur la Pointe de l'est de l'île d'Anticosti.



NOMAD: Met's New Sentinel at Sea

An unusual-looking buoy bobbing up and down in the rolling Atlantic off the coast of Nova Scotia is proving to be a welcome asset to the staff of the Meteorological Branch.

Called NOMAD (for Navy Oceanographic Meteorological Automatic Device), the device is a self-contained and unattended weather station housed in a buoy that automatically takes its meteorological observations at pre-determined intervals and transmits them by its own radio to receivers ashore.

The first of its kind in Canadian waters, the weather buoy has been loaned to the Met. Branch by the United States Navy for two years.

For the Navy, the loan offers an opportunity to have the serviceability of the equipment tested in severe winter conditions. For Canadian meteorology, it will provide valuable experience in the maintenance and operation of a seaborne station.

The NOMAD was designed to be completely self-contained and to be capable of unattended operation at sea for at least 12 months.

The buoy itself consists of a boat-shaped hull, 20 feet long by 10 feet wide on deck, built up of welded aluminum plates.

Fully-loaded (at a total weight of about eight tons), it draws approximately seven feet of water and has a freeboard of 18 inches.

The interior of the hull is divided into compartments to provide 12 wells in which are housed 48 battery cells and the main electrical components.



NOMAD

The meteorological instruments are housed in waterproof boxes supported on two tubular masts which rise from the aftward end of the deck.

At the forward end, a four-legged tower carries a flashing warning light and two windmills which operate a battery charger.

A 20-foot length of cable supported on floats trails from the stern of the buoy to carry an instrument which measures the temperature of the sea 18 inches below the surface.

The buoy, controlled by its own clock, automatically makes reading of air and water temperatures, barometric pressure, wind speed and direction, converts them into groups of Morse code letters and transmits them at three-hour intervals.

The NOMAD signals on a special frequency which can be picked up by radio stations more than 800 miles away in normal daytime conditions although considerable loss of strength occurs at night due to fading.

Beginning in June, however, the D.O.T. aeradio station at Goose, Labrador, began picking up the buoy's signals in an effort to obtain better night reception.

From the radio stations, the coded reports received are forwarded to the weather office at Sydney where they are translated into the equivalent values of temperature, pressure and wind and sent out over the meteorological teletype circuits to the forecast offices in Eastern Canada where they contribute valuable information for the preparation of weather forecasts for a wide variety of users.

NOMAD's forerunners have operated chiefly in sub-tropical waters, the Caribbean and the Gulf of Mexico, one of them being the first automatic floating weather station to detect a hurricane (Ethel, of September 1960), and another was the first to continue to function throughout a similar storm (Hurricane Carla, of September 1961).

The buoy was shipped by motor transport early last September from Washington, D.C., to the D.O.T. dockyard at Dartmouth, N.S., where it was prepared for its sea trials by technicians from the U.S. Navy and the Telecommunications and Meteorological branch of the Department of Transport.

Within two weeks, all was ready and Canadian NOMAD N4S was towed out to its chosen anchorage by CCGS *Edward Cornwallis*.

The mooring operation was carried out without a hitch in a depth of 50 fathoms despite rough seas and at 20 minutes past 11 o'clock on Sept. 20, 1966, NOMAD transmitted its first observation.

Its powerful signal continued to be received on schedule by D.O.T. stations at Sydney and Canso, N.S., and St. John's, Nfld., throughout the fall, winter and spring in spite of the gales which so frequently lash the western Atlantic at that time of the year.

The buoy was retrieved from its mooring site last April 27 and towed to Dartmouth for inspection and overhaul. Other than a heavy coat of barnacles below the waterline and some superficial damage to the deck railing, it showed little evidence of its seven months at sea.

After six weeks ashore, during which a thorough check of all its component systems and a re-charging of its batteries were carried out, Canada's unique weather buoy is now back "on station," faithfully transmitting its observations.

From the diary of W. B. McLaughlin



Penned in a script that flows across the opening page of the heavily-bound black book is the notation: "Sunday, Sept. 1, wind SW, fresh breeze, hazey (sic) with fog and rain."

The year is 1878 and the words are the opening entry in a diary kept by W. B. McLaughlin, first lightkeeper at South West Head lightstation, Seal Cove, Grand Manan Island, New Brunswick.

Located by T. E. Appleton, who is writing a book on the history of marine services in Canada for the Department of Transport, the diary and an old photograph of its author give a rare glimpse into the life and times of one of Canada's pioneer lightkeepers.

Mr. McLaughlin, great great grandfather of O. A. Benson, the present lightkeeper at the station, filled his diary with the events and memorabilia of his time, from the number of wicks he used to keep the light burning, to recipes, poems, clippings from newspapers, and the names and addresses of visitors.

"South West Head, Grand Manan," the diary notes in its early pages, "is located on Gull Cliff; latitude N 44 degrees, 36 minutes, zero seconds; longitude W 66 degrees, 54 minutes, 16 seconds; revolving catoptric red and white light; makes complete revolution in two minutes, showing three white and three red flashes at intervals of 20 seconds, 200 feet above high water; visible 20 miles; white, square tower, dwelling attached."

A census report showed that the island counted 1,876 inhabitants in 1871 and recorded 2,397 when heads were counted again 20 years later in 1891.

Lumped in with details of the progress of the Boer War and stories about the Battle of Waterloo that mingle with accounts of the passing of the famous and the infamous of the day, are several selections of romantic poetry popular at the time.

One, titled "Whisper Softly, Mother's Dying," begins:

*"Whisper softly, mother's dying,
Soon she'll close her loving eyes,
Angles (sic) wait to bear her gently
To her home beyond the skies."*

The big news of the day, however, for the residents of Grand Manan, is contained in a newspaper clipping dated sometime between 1898 and 1900.

Headed "Life Boat at Seal Cove Recently Established by the Dominion Government," it said:

"Some time ago, in response to a request made by persons in St. John (sic) and elsewhere interested in the navigation of the bay, a life saving station was, by the direction of the Minister of Marine and Fisheries, established at Seal Cove, Grand Manan.

"The station is now fully-equipped, and a picture is given below of the boat her crew and launching ways (enclosed with the clipping was a drawing of the new station).

"The Coxswain is Frank Benson, a very active and competent man; there are six boatmen and three reserve men, all of whom reside close to the station.

"The boat house is an excellent one, 20 feet by 36 feet, with quarters in the upper deck for shipwrecked persons. There is an iron railway launching slip with skids to suit, so that the boat can be put afloat even at dead low water in a few minutes.

"Signals and all details incidental to such a station have been provided and Captain Bloomfield Douglas, R.N.R., of the marine department, under whom the work was carried out, is naturally quite proud of this station."

RETIREMENTS

A sense of worth

*Irrevocably, endlessly, one by one,
The years unravel behind,
Recording a history of work well done
With problems of every kind.
Finally, now the time has come
To seek a well-earned rest;
Welcomed by most, but feared by some,
Retirement, itself, is a test.
After the days of pressure and rush,
And the constant call of the 'phone,
And weary delays in the traffic's crush,
Comes a time that's all your own:
To rise and watch the blush of dawn,
Or linger in the shade;
To pull the weeds, and mow the lawn,
Or drink pink lemonade;
To read new books, and see old friends,
And know a sense of worth.
A new life starts as the old one ends:
Retirement can be rebirth!*

—THELMA ROBERTS

Captain F. S. Slocombe

A man who went to sea as a 16-year-old deckhand, rose to command a Second World War ship on the Halifax-Murmansk route for which he was named a Member of the British Empire, and served 30 years with the Department of Transport, has retired to begin a new career.

Captain F. S. Slocombe, 64, chief of the department's Nautical and Pilotage Division for the past 13 years, plans to enter the University of Toronto's Trinity College this fall where he will study theology with the intention of entering the ministry of the Anglican Church of Canada after graduation.

"It's not that unusual, really," remarked the man whose interests lie in choir singing and music, specifically the organ. "I've been active in the church all my life."

Born in Cardiff, Wales, Capt. Slocombe started work at 14 in the office of ship-brokers Corry and Blundell.

In 1919, he went to sea, obtaining his foreign-going master's certificate by the time he was 25 years of age.

In 1930, he came to Canada, where he started sailing on the Great Lakes, then spent six winters teaching nautical subjects at the Owen Sound Collegiate in Owen Sound, Ont.

Capt. Slocombe joined the Department of Transport as examiner of masters and mates at Toronto in 1937 after he had risen to become first mate aboard the SS "Manitou."

During the Second World War, he took command of the Canadian Government Ship "Montcalm" on the Halifax-to-Murmansk route so heavily attacked by enemy submarines, for which he was invested as a Member of the British Empire by the Earl of Athlone, Canada's Governor General, on Nov. 23, 1943.

Capt. Slocombe finished the war lecturing to Victory Loan audiences in war plants, then returned to his D.O.T. career where he was promoted to assistant supervisor of nautical services in 1946, appointed supervisor of pilotage in 1952, and promoted to chief of the Nautical Division in 1954.

Capt. Slocombe and his wife were honored by his colleagues at a dinner held at the Clark Memorial Recreation Association centre in Ottawa last July 24.

F. W. Sealey

A D.O.T. career that spanned the past 39 years has entered a new phase, according to F. W. (Fred) Sealey, who retired recently as officer-in-charge of the Victoria aeradio station.

"Retirement has always seemed to me to be the end of things," Mr. Sealey wrote in a letter to "The DOT" in which he said he wanted to express his thanks for the wonderful farewell party given by his fellow employees.

"Instead, I suddenly realized that retirement was another phase of a D.O.T. career and, rather than something to be feared, was something to be looked forward to," he said. "Looking around and talking to fellows who were there, many who were happily retired and active, gave me the inspiration to emulate them."

He added: "This going away is something experienced, never to be forgotten, as long as I live. Thanks, fellows."

Born in England, Mr. Sealey discovered his calling in 1918 while his family was enroute to a new home in Victoria.

"While on the boat from Vancouver, I happened to be outside the 'wireless' cabin when the operator started up the old spark transmitter and the crash of the spark could be heard all around the deck," recalled Mr. Sealey. "I decided right there and then that the 'wireless' was for me."

With a daytime job and classes at night, he quickly obtained his certificate and went to sea with the Canadian Marconi Company.

In 1928, he was inducted into what is now D.O.T. telecommunications and assigned as radio operator aboard the famed Royal Canadian Mounted Police vessel *St. Roch* on her maiden voyage to the Arctic.

When the ship returned home 17 months later, Mr. Sealey was re-assigned to Coppermire where he later served as OIC from 1931-32.

Following postings in Victoria and Lulu Island, B.C., Mr. Sealey returned to technical duty in connection with airways installations across B.C. during the Second World War and remained in this field until he retired as OIC at Victoria last May 17 and was formally inducted as the newest member of a large group of retired D.O.T. employees living on the West Coast.

Among the retired D.O.T. staff at Mr. Sealey's farewell party were Jack Bowerman, Jim Harker, Bill Meiss, Don Mitchell, L. W. Stevenson, George Gilbert, George Lowe and O. H. "Doc" Quealy.

In summing up his career, Mr. Sealey says: "Where else could the technically-minded person find such a career except in the Department of Transport? And, mind you, I am not any exception. The chances are there still."



Captain and Mrs. F. S. Slocombe and Gordon W. Stead, Assistant Deputy Minister, Marine.

Neville Whitaker

A man who first became interested in radio as a "ham" operator over 45 years ago and has been one of the better known Canadian "hams" ever since has retired from the Department of Transport.

Neville ("Whit") Whitaker was born in East London, South Africa, and came to Canada in 1923 where he entered the service of the Imperial Bank of Canada as a junior in 1925.

He wrote the examination for his commercial radio operator's licence and joined the Department in 1941, serving at various times in Clyde River, St. John's, Nfld., and Ottawa, where he has been stationed for the past 15 years.

More than 100 friends and co-workers gathered in the G.E.M. club rooms last June 16 to honor Whit on his retirement and present him with gifts that included a skill saw, a purse of money and a vanity case for Mrs. Whitaker.

William White

William "Bill" White, area marine superintendent at Victoria, has retired from the Department of Transport after 17 years of service.

Mr. White started with the Department as the second engineer aboard CCGS *Alexander Mackenzie* in the Prince Rupert marine agency in May 1950.

In 1952, he was promoted to chief engineer of the *Mackenzie*, in 1956, he was transferred to the Victoria agency as chief engineer aboard CCGS *Sir James Douglas*, and in 1960 was named chief engineer aboard CCGS *Simon Fraser*.

As chief engineer, he sailed with the "Fraser" from Victoria to Quebec City via the Panama Canal when the ship was transferred to the Quebec marine agency.

Mr. White became area marine superintendent on Jan. 1, 1964, the position he held until his retirement.

Mr. White and his wife Ina plan to spend several months travelling in Canada before departing on a long vacation to their native Scotland.

J. S. McGowan



Left to right, Terry Thompson, D.C. Archibald and Mr. McGowan

Jack Stewart McGowan, senior meteorological technician in charge of the Toronto City Observing and Information Office, has retired because of ill health, ending a 28-year career with the Meteorological Branch.

Mr. McGowan graduated from McMaster University with a degree in chemistry in 1934. Before joining the Met. Branch, he spent most of this earlier career in Kapuskasing.

Following temporary duty at Kingston, Ottawa and Sioux Lookout, Mr. McGowan was transferred to Toronto, where he spent 20 years serving the public interest by providing weather information for the City of Toronto from records of his meteorological observations.

On May 24, Mr. McGowan was presented with a radio by D. C. Archibald, chief of the basic weather division, and Terry Thompson, formerly Mr. McGowan's assistant, acting on behalf of his friends and colleagues in the branch.

Mr. McGowan now resides in Hamilton.

A. F. Chisholm

Alex Chisholm, a D.O.T. meteorologist, retired last May after more than 36 years of active service in the Meteorological Branch.

A graduate of the University of Dalhousie, he received his master's degree before the age of 22 and entered the service.

Mr. Chisholm was posted to Toronto on July 18, 1930 and remained at Met. headquarters and the Malton Forecast Office until 1952, first as a staff forecaster, then in 1947 as second in charge of the Malton office.

In addition to the daily forecasts, he carried out research studies, one of which was designed to improve forest fire hazard forecasts, and also took responsibility for all the aviation forecasts in Canada until the establishment of forecast offices at airports in 1939.

In 1952, Mr. Chisholm won a posting to Gander and completed his 31-year career as a forecaster there.

On his return to Toronto, he was transferred to the research section and began work on the programming of large electronic computers.

His chief interest lay in mesometeorology and short range forecasting and the use of computers to carry out research on accumulated punched card records of hourly data. He reported on his work in Technical Circular No. 620: "A system for automated study of multi-dimensional relationships within large-volume data samples."

At a gathering held in his honor, his colleagues presented Mr. Chisholm with a set of luggage since he and Mrs. Chisholm plan to do some travelling in between spending some time on his favorite hobby, gardening.



D. P. McIntyre, left, chief of research and training, and Mr. Chisholm.

CROSS CANADA DATELINE

Lightkeepers

The Public Service Staff Relations Board has directed that a representative vote be conducted among certain employees in the lightkeepers group to determine whether they wish the Public Service Alliance of Canada to represent them as their bargaining agent.

Persons eligible to vote are those in the operational category on strength as of August 16th, 1967 (other than employees whose duties include supervision in that group).

Not eligible to vote are those who, between August 16th and the date that the vote is taken, voluntarily terminate their employment, transfer to positions not included in the unit or are discharged for cause.

The vote is to be taken by mail and eligible voters will be provided with a ballot kit containing voting instructions and other necessary material.

Gardiens de phares

La Commission des relations de travail dans la Fonction publique a décidé qu'un vote de représentation sera pris chez certains employés du groupe des gardiens de phares afin de déterminer s'ils désirent que l'Alliance de la Fonction publique du Canada les représente comme leur agent négociateur.

Ont le droit de participer au vote les employés du groupe des gardiens de phares de la catégorie de l'exploitation sur les effectifs au 16 août 1967 (sauf les employés dont les fonctions comprennent la surveillance d'autres employés de ce groupe). N'ont pas le droit de participer au vote ceux qui, entre le 16 août et le jour du scrutin, auront mis fin volontairement à leur emploi, auront été mutés à des postes ne faisant pas partie de l'unité ou auront été congédiés à titre de sanction.

Le vote se déroulera par correspondance. Les employés admissibles au vote recevront une pochette de scrutin contenant des instructions sur la votation et tout ce qu'il faut pour voter.



A ROYAL GREETING—His Royal Highness Prince Philip, Duke of Edinburgh, waves to our cameraman after arriving by Canadian Coast Guard helicopter at the Britannia Yacht Club for a ceremony which took place during the Centennial Royal Visit in July. The Prince, who was brought to the yacht club from Government House where he and the Queen were staying, was flown by W. J. (Bill) Glennie, the D.O.T.'s supervising helicopter pilot, and accompanied by T. E. Appleton of Marine Services, who is well known in the sailing and shipping world.

UN ACCUEIL ROYAL—Son Altesse Royale, le prince Philippe, duc d'Edimbourg, salue notre caméraman à son arrivée au club nautique Britannia, à bord d'un hélicoptère de la Garde côtière canadienne, pour participer à une cérémonie qui a eu lieu en juillet dernier, lors de la visite royale à l'occasion du Centenaire. L'hélicoptère ayant à bord le prince, qui arrivait de la résidence du Gouverneur général, lieu de séjour du couple royal, était piloté par W. J. (Bill) Glennie, pilote d'hélicoptère surveillant du ministère des Transports. Le prince était accompagné par M. T. E. Appleton, des Services de la marine, bien connu dans les milieux nautiques et maritimes.

Suggestion Awards Pay \$420 for Ideas

Two D.O.T. employees awarded \$50 each for suggestions adopted by the department were among 14 personnel who won a total of \$420 recently.

D. J. Cullen, an electronics technician in the Toronto area, won \$50 for suggesting a modification that was adopted at five D.O.T. radar sites across Canada.

A. H. Cooke, a radio operator at Sandspit, B.C., also won \$50 for suggesting that the Main Breaker controlling the electrical systems in all government buildings be identified with a large red arrow and the lettering "Main Breaker."

A \$40 suggestion award winner was

F. L. Worsley, a clerk at the marine agency in Victoria, who suggested a new form to be used in transferring stock within a depot.

Other suggestion award winners included G. A. Toole, Forth Smith, N.W.T., \$30; N. L. Larson, Lethbridge, Alta., \$30; C. M. Hockey, Vancouver, \$30; J. D. de Freitas, London, Ont., \$30; H. G. Perkins, Kingston, Ont., \$30; and J. L. DesBiens, St. Lambert de Levis, Que., \$30.

Also included were Joseph Maxwell, Sault Ste. Marie, \$25; D. R. Dann, Moncton, \$25; Miss Ernestine DeLuca, Ottawa, \$25; E. D. Smiley, Ottawa, \$15; R. J. Hamon, Winnipeg, \$10.

Surprise Visit at Churchill

Churchill—Can you imagine having 112 unexpected guests literally drop in on you for the night?

It happened recently to P. R. Nicholas, airport manager at Churchill, and his staff, but left them pleasantly surprised.

The unexpected occurred shortly after 7 p.m. one evening when one of four engines on a Pacific Western Airlines plane on an Amsterdam-to-Calgary charter flight quit about 200 miles north of Churchill forcing the plane to make an emergency landing.

The aircraft landed while a father and son banquet was in progress at the Borealis Club, so the staff was simply asked to stay on and, as soon as the tables were vacated, the dining room was reset and the new arrivals were treated to roast chicken with all the trimmings.

While the 112 passengers and crew were having dinner, the airport staff and towns-

people found transportation for those who were being bedded down at the Churchill and Hudson hotels and at the town's motel.

Said the town newspaper, *The Taiga Times*: "One of the happier by-products of the event was the forming of a number of friendships. One of the passengers, a B.C. mining executive, offered employment and housing accommodation at a mining project on the West Coast and it was accepted on the spot by one family which had enough of Churchill winters!"

The passengers and crew continued their journey in another plane the next day with praise for the high degree of co-operation by the D.O.T. personnel at Churchill and the wonderful hospitality shown by the town's residents.

In a letter that followed the incident, J. C. S. Miles, a vice-president of PWA, thanked Mr. Nicholas and his staff "on behalf of the Company, the crew and the passengers."

Mr. Nicholas reported that the airport's passenger-handling facilities, while overcrowded, "served adequately from the standpoint of aircraft ramp, control of passengers, washrooms and baggage-handling."

Trophy Presented

Toronto—The McIntyre trophy, awarded annually to the airport emergency services unit in the Toronto region with the best fire prevention record, has been presented to the Emergency Services Department at Toronto International Airport.

The trophy was presented by J. R. Belisle, regional manager of airports, to R. E. Harris, airport manager, acting on behalf of Chief N. B. O'Neil and the men of the unit.

Named after the late D. A. McIntyre, who first established airport emergency services, the award was created in 1960 on Mr. McIntyre's retirement as regional supervisor of airports.

PULLING THEIR WEIGHT—With the co-operation of the weatherman, who managed to hold off a summer downpour until evening, the Department of Transport Recreation Association pulled off (if you'll excuse a pun) one of the best staff picnics ever held when hundreds of headquarters employees and their families invaded Ottawa's Vincent Massey Park for the Centennial Picnic last July 12. The D.O.T. crew above put their weight behind one of the main events of the afternoon to prove that a good time is what you make it.

Y METTRE DU SIEN—C'est grâce à la collaboration du météorologiste qui réussit à retarder jusqu'au soir une averse estivale que l'Association récréative du ministère des Transports connut un des pique-niques les plus réussis de son histoire: en effet, des centaines d'employés de l'Administration centrale et leurs familles envahirent le parc Vincent Massey d'Ottawa le 12 juillet dernier, à l'occasion du pique-nique du Centenaire. L'équipe du Ministère (ci-dessus) y participa à l'une des manifestations principales de l'après-midi, prouvant ainsi que, pour passer un moment agréable, il faut y mettre du sien.



(Department of Transport photo by Bob McInnis)

(Photo du ministère des Transports par Bob McInnis)

Transport

ALBUM

des Transports



EDMONTON INTERNATIONAL AIRPORT

COST OF TERMINAL:

\$10,000,000

NO. OF RUNWAYS:

Two, one 10,200 feet in length, the other 11,000 feet.

PASSENGER TRAFFIC (1966):

approx. 500,000

AIRCRAFT MOVEMENTS (1966):

29,272

AÉROPORT INTERNATIONAL D'EDMONTON

COÛT DE L'AÉROGARE:

\$10,000,000

NOMBRE DE PISTES:

Deux, de longueurs de 10,200 pieds à 11,000 pieds

NOMBRE DE VOYAGEURS (1966):

environ 500,000

ARRIVÉES ET DÉPARTS (1966):

29,272

CAIT 15

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NOVEMBER-DECEMBER 1967
NOVEMBRE-DÉCEMBRE 1967



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Editor Bryan Goodyer
Rédacteur français Edouard Deslauriers

THE DOT is a staff magazine published by the Information Services Division of the Department of Transport, Government of Canada, under the authority of the Minister, Hon. Paul T. Hellyer.

THE DOT est la revue des employés publiée par la Division des services d'information du ministère des Transports, gouvernement du Canada, avec l'autorisation du ministre, l'honorable Paul T. Hellyer.

OUR COVER

While Transport Minister Paul T. Hellyer, left, and Denis McAuliffe, right, a 24-year-old student at the Air Services Training School in Ottawa, look as if they can hardly believe it, the inevitable happened recently when Jolly Old Saint Nick showed up on one of the school's incoming air traffic control units. Actually, our cover resulted from some deft camerawork by Ray Stone of the Minister's staff, the artistic flourish of D.O.T. staff artist Jack Nakamoto, and the co-operation of Mr. Hellyer, Denis, and the Air Services staff at Ottawa International Airport, all of whom join with us in wishing each of you a very merry Christmas and a happy and prosperous New Year.

FRONTISPICE

Le ministre des Transports, l'honorable Paul T. Hellyer, à gauche, et Denis McAuliffe, étudiant à l'Ecole des Services de l'Air du ministère à l'aéroport international d'Ottawa, paraissent absolument bouleversés par ce qui vient de surgir sur l'écran de radar servant au contrôle de la circulation aérienne. C'est en effet le bon vieux Père Noël qui arrive avec ses rennes et son traîneau chargé de gâteries pour tous les goûts. La scène, évidemment truquée, est le résultat d'un montage réalisé par le photographe Ray Stone, attaché au bureau du ministre, avec l'aide de l'artiste et dessinateur du ministère, Jack Nakamoto. Les auteurs du montage photographique et ceux qui ont participé à sa mise en scène se joignent à nous pour souhaiter à tous et chacun un joyeux Noël et une bonne et heureuse année.



AN ENVIABLE RECORD

From coast to coast the personnel of D.O.T. can reflect on a dynamic year in all facets of communications. I am proud to be spending the Christmas of 1967 in such illustrious company.

As our Centennial year draws to a close, the men and women of the Department can proudly look back on the contributions that they have made in the development of a better country for all Canadians. We can also look ahead to the future knowing that we have the "know-how" to expand upon this enviable record.

To the men and women of the Department and their families, my warmest personal wishes for a Merry Christmas and a prosperous New Year.

UN TRAVAIL BIEN FAIT

Pour tous les employés du ministère des Transports qui œuvrent d'un océan à l'autre, l'année qui s'achève témoigne de nombreuses réalisations dans tous les secteurs des communications. Je suis fier de passer Noël 1967 en si illustre compagnie.

A la fin de l'année du Centenaire, les employés des deux sexes du ministère peuvent être fiers de leur apport en vue d'améliorer les conditions de vie des habitants du pays tout entier. Les perspectives d'avenir sont très prometteuses, car l'expérience nous prouve que nous avons toutes les possibilités d'ajouter à nos réalisations passées.

Aux employés du Ministère et à leurs familles, mes vœux les plus sincères à l'occasion de Noël et du Nouvel An.

A handwritten signature in dark ink, reading "Paul T. Hellyer". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.



A WORD OF THANKS

As part of the general trend in modern society towards shorter working hours and more time for other types of activity, the law now provides several special holidays for us, in addition to the regular period of annual leave. Two of these in particular mean a great deal to me.

July 1st is the symbol of our nationhood; and December 25th has become a western symbol for the finest in the human spirit in terms of selflessness. On this latter occasion my thoughts will be with all of you and I send you my thanks for a job well done in 1967.

UN SINCÈRE MERCI

Suivant le courant général de la société moderne qui tend vers des heures de travail abrégées afin de laisser plus de loisirs, la loi nous fait maintenant bénéficier de congés spéciaux en plus de la période régulière des vacances annuelles.

Parmi ces congés spéciaux, deux me sont particulièrement chers: le 1^{er} juillet, symbole de notre condition de nation, et le 25 décembre, devenu en Occident le symbole de ce que l'humanité a de plus grand, sa générosité. En cette dernière occasion, mes pensées seront avec vous et je vous remercie sincèrement pour le si beau travail accompli en 1967.

J. R. Baldwin

Deputy Minister

Sous-ministre



Hon. Paul T. Hellyer



Hon. J. W. Pickersgill

Canada's New Minister of Transport

Canada's 10th Minister of Transport, the Hon. Paul Theodore Hellyer, was officially sworn in last Sept. 19 in a brief ceremony in Ottawa.

Mr. Hellyer, formerly the minister for national defence, was appointed to head the Department of Transport following the resignation of the Hon. J. W. Pickersgill, who is now president of the Canadian Transport Commission.

In a short space of time—he was a Member of Parliament at the age of 25, a Parliamentary Assistant to a Minister at 32, and a Minister of the Federal Cabinet at 33—Mr. Hellyer has had a remarkable career.

When he was named Associate Minister of National Defence in 1957, he was at 33 the youngest Cabinet Minister since the turn of the century.

Aside from his political career which was launched when he was fresh out of university, Mr. Hellyer has been active in business.

In 1962, when he resigned to devote his full time to public life, he was president of Curran Hall Limited of Toronto, one of Canada's leading home-building companies.

Mr. Hellyer, who is six feet, three and one-half inches tall, was born on Aug. 6, 1923, on a farm near Waterford, Ont., the son of A. S. Hellyer and Lulla M. Anderson.

After attending high school at Waterford, he graduated in aeronautical engineering from the Curtiss-Wright Technical Institute of Aeronautics at Glendale, California, in 1941.

Subsequently, he was employed by Fleet Aircraft Limited at Fort Erie, Ont., starting as junior draughtsman and working up to group leader in engineering on the Cornell aircraft elementary trainer which was used by the Royal Canadian Air Force during the later stages of the Second World War.

Having already obtained his pilot's licence in California, Paul Hellyer joined the RCAF but before he earned his wings, the RCAF no longer required pilots so he served the balance of the war with the Royal Canadian Artillery.

After demobilization, Mr. Hellyer went into business in Toronto and at the same time worked his way through university, earning his B.A. degree at the University of Toronto.

In 1949, at the age of 25, he decided to run for Parliament

and he became the youngest member of the House of Commons, representing a riding that had not voted Liberal since Confederation.

In 1953, he was re-elected and in Feb. 1956, he was appointed Parliamentary Assistant to the Hon. Ralph Campney, Minister of National Defence.

Fourteen months later, just weeks before the resignation of the government, he was sworn to the Privy Council as Associate Minister of National Defence.

Defeated in the general election of June 1957 and March 1958, Mr. Hellyer was re-elected to the House of Commons as the Member of Parliament for Toronto-Trinity in a by-election held in December 1958.

As a member of the Liberal Opposition, he became the

party's defence critic and acted as chairman of the 1961 Liberal Rally in Ottawa. He also served as a Parliamentary representative to the North Atlantic Treaty Organization under both Liberal and Conservative administrations.

Re-elected in the general election of April 8, 1963, Mr. Hellyer was named Minister of National Defence when the Cabinet was formed.

Married to the former Ellen Jean Ralph, Mr. Hellyer has three children, Mary Elizabeth, Peter Lawrence, and David Ralph.

An active member of the United Church of Canada, Mr. Hellyer has devoted most of his spare time for the past 15 years to his church, in spite of the heavy demands of public life.

Nouveau ministre des Transports

L'honorable Paul Théodore Hellyer, dixième ministre des Transports du Canada, a été assermenté officiellement le 19 septembre dernier, au cours d'une brève cérémonie qui s'est déroulée à Ottawa.

M. Hellyer, qui était auparavant ministre de la Défense nationale, a été nommé à la direction du ministère des Transports à la suite de la démission de l'hon. J. W. Pickersgill, qui est maintenant président de la Commission canadienne des transports.

Député à l'âge de 25 ans, adjoint parlementaire à 32 ans et ministre du Cabinet fédéral un an plus tard, M. Hellyer a connu, en peu de temps, une carrière remarquable.

En 1957, lorsqu'il a été nommé ministre associé de la Défense nationale à l'âge de 33 ans, il était le plus jeune ministre du Cabinet depuis le début du siècle.

Outre la carrière politique qu'il a entreprise à sa sortie de l'université, M. Hellyer s'est occupé activement d'affaires.

En 1962, lorsqu'il s'est démis de ses fonctions pour se consacrer entièrement à la vie publique, il était président de la Curran Hall Limited of Toronto, l'une des plus importantes compagnies de construction domiciliaire du Canada.

Fils de A. S. Hellyer et Lulla M. Anderson, M. Hellyer, qui mesure six pieds trois pouces et demi, est né le 6 août 1923, dans une ferme située près de Waterford (Ontario).

Après avoir fait ses études secondaires à Waterford, il obtient, en 1941, un diplôme en génie aéronautique du Curtiss Wright Technical Institute of Aeronautics, à Glendale (Californie).

Il travailla ensuite à l'emploi de la Fleet Aircraft Limited, à Fort Erie (Ontario), où il remplit d'abord les fonctions de dessinateur subalterne et devient par la suite chef de groupe des ingénieurs affectés à la mise au point de l'avion d'entraînement élémentaire *Cornell*, que l'Aviation royale du Canada a utilisé vers la fin de la seconde guerre mondiale.

Ayant déjà obtenu son brevet de pilote en Californie, Paul Hellyer s'engage dans l'ARC, mais avant qu'il puisse recevoir ses ailes, l'Aviation n'a plus besoin de pilotes. Il sert

donc dans l'Artillerie royale canadienne jusqu'à la fin de la guerre.

Après la démobilisation, M. Hellyer entre dans les affaires, à Toronto, tout en poursuivant ses études universitaires, et il obtient son baccalauréat ès arts de l'Université de Toronto.

En 1949, à l'âge de 25 ans, il décide de se présenter aux élections fédérales et il devient le plus jeune député de la Chambre des communes, représentant une circonscription qui n'avait pas élu de candidat libéral depuis la Confédération.

Il est réélu en 1953 et, en février 1956, il est nommé adjoint parlementaire de l'honorable Ralph Campney, ministre de la Défense nationale.

Quatorze mois plus tard, quelques semaines à peine avant la démission du gouvernement, il prête le serment de membre du Conseil privé, à titre de ministre associé de la Défense nationale.

Défait aux élections générales de juin 1957 et de mars 1958, M. Hellyer est réélu à la Chambre des communes en tant que député de Toronto-Trinity, lors d'une élection complémentaire tenue en décembre 1958.

En qualité de membre de l'opposition libérale, il devient le porte-parole de son parti en matière de défense, et il exerce les fonctions de président à l'occasion du congrès du parti libéral tenu à Ottawa en 1961. Il est également représentant parlementaire auprès de l'Organisation du Traité de l'Atlantique Nord sous le gouvernement libéral aussi bien que conservateur.

Réélu aux élections générales du 8 avril 1963, M. Hellyer est nommé ministre de la Défense nationale lors de la formation du Cabinet.

Il a épousé Ellen Jean Ralph, de qui il a eu trois enfants: Mary Elizabeth, Peter Lawrence et David Ralph.

Membre actif de l'Église Unie du Canada, M. Hellyer consacre, depuis 15 ans, presque tous ses loisirs aux œuvres de son église, malgré les lourdes obligations que lui impose sa vie publique.

*Budget planning
has become a "family" exercise*

BATTERING THE BUDGET ABOUT

The Air Services board room at Ottawa resounded with earnest—and occasionally vehement—discussion as regional staffs met separately with headquarters personnel to plan activities for the next five years.

C. Mornington Brant, whose quiet voice and incisive analysis of basic issues guided each of the meetings, considers that the conferences and preparations for them have laid a firm basis for the development of sound programs of expenditure, both today and tomorrow.

"It's a somewhat new management concept in which every person involved, at every level of responsibility, has an opportunity and an obligation to express opinions and make recommendations," explained Mr. Brant, who retired this fall as Deputy Director Air Services.

"In line with the new pattern of wider delegation of authority, each Regional Director Air Services is responsible, with his staff, for developing a program of activities and capital expenditures."

Here's how it worked.

Late in 1966, each region was asked to update its program to cover the five years succeeding 1967-8, placing the main emphasis on the first of these years.

Regional plans were submitted early in 1967 and headquarters divisions were circulated for comments.

Then, each regional director arrived with his staff to do battle for his claims on the public purse.

The plan was to give all projects a rating of priority and submit a tentative budget to Treasury Board. Later, when the Board indicated the amount of money it was prepared to grant Air Services for its program, the proposed regional budgets would be subjected to another keen examination.

One of the problems at the regional meetings appeared to be that there could be no assurance that funds would be available to do everything planned.

Mr. Brant saw no problem.

"Our political masters decide on the relative priority of aviation programs as against other programs," he said. "Our responsibility as planning officers is to make recommendations, indicate our priorities and the likely consequences if our proposals are not carried out, and make it possible for our masters to determine the overall governmental priorities."

Most discussion was directed to plans for the following fiscal year (1968-9) and, with no certain knowledge of what funds would be approved, it was largely a matter of fixing priorities rather than accepting and rejecting proposals. Mr. Brant set out the following classifications:

- A. Essential work in which safety is involved;
- B. Essential work in which service is involved;
- C. Important work which could affect future programs but does not have an immediate serious effect;
- D. Work which could be deferred without immediate consequences.

Mr. Brant saw a number of advantages in this system of classification. With all projects fully planned for presentation, there is a good supply of relatively low priority projects which can be restored to the program if additional funds become available.

Another advantage is that, in subjecting projects throughout Canada to the same criteria, their importance can be assessed on a national, as well as regional, basis. Mr. Brant would prefer, instead of supplying equal portions of money to each region, to assess on a national basis some of the less essential projects, and to make budget allocations accordingly. Another argument against block allocations of funds, regardless of projects planned, is that some regions would be unable to maintain a balanced program in some years. In Vancouver region, for example, a large sum is being spent on the Vancouver International Air Terminal. If that sum were to come out of the region's regular budget without due consideration, there would be little left to carry out other responsibilities.

The meetings were lively and intense. Occasionally a member of headquarters staff would question the need for a specific project, or suggest that it be done under headquarters management. Then the regional director usually brought up his shock troops—members of his staff who were experts on the matters under discussion.

When the question of whether projects should be managed by headquarters or regional staff arose, Mr. Brant usually reminded the meeting that the Assistant Deputy Minister for Air, G. A. Scott, on whose behalf he was conducting the meetings, wanted headquarters to phase out of handling projects that could be managed in the regions. Most of these questions were concerned with engineering, in which headquarters personnel have high qualifications and much experience.

As the last debate wound to a close, Bob Campbell, chief of co-ordination and planning, and his staff calculated a total of \$59,000,000 requested by Air Services regions for capital expenditure. Requests by region varied from \$5,000,000 to \$18,500,000. (The total budget proposed by all of Air Services is in excess of \$80,000,000).

In the course of the meetings, programs had been hammered into sound proposals with firm arguments to back each one. Participants gained new insights into the policy and aims of the Department. In discussing problems at such close quarters, too, they came to a better understanding of the people with whom they usually must deal at a distance; an understanding that will make co-operation within our far-flung department much easier.

His Christmas is Helping Others

Like most people who are bustling about doing their last-minute Christmas shopping right now, a quiet but dedicated Winnipeg meteorologist is hard at work—although he's shopping for a somewhat larger "family".

He's Eric Dexter, a man who has devoted 10 days of his annual leave each year for the past eight years to organizing help in the form of food and gifts for needy families in the Manitoba capital.

For the past four years, Mr. Dexter has headed the Anglican Social Service program which comes under the Christmas Cheer Board, an agency of Winnipeg's United Way.

Ask Mr. Dexter about it and he'll tell you it's a job that's getting bigger all the time.

"Through congregations, individuals and organizations, we solicit donations of canned goods, toys and money," he said.

"A church hall is used to sort the goods and pack the hampers from lists of names supplied by the Christmas Cheer Board," he added. "We are not in any way limited to the denomination, although we do receive all the Anglican referrals."

In addition to the donated goods, Mr. Dexter is responsible for the purchase of needed groceries and toys as well as the turkeys, chickens and hams that go in every hamper.

Last Christmas when the project involved 35 congregations in Greater Winnipeg, Mr. Dexter had 30 women working as volunteer packers, six men and teenagers moving hampers and loading cars, and about 120 men and women delivering the bulging hampers of food and goodies to those who need them.

"When the smoke cleared away and we could take stock of what we had accomplished, it was found that we had packed and delivered 693 hampers, which brought assistance to 3,010 people including about 2,200 children and teenagers who also received gifts, and my budget for the job was \$5,200 over and above the donated goods and toys."

And why does he do it?

"The flood of letters of thanks that follow the Christmas season always seem to make it worthwhile and draw me back to it again the next year," replied Mr. Dexter.

La joie des autres fait son bonheur



Comme il le fait assidûment depuis déjà huit ans, un météorologiste de Winnipeg a entrepris encore cette année sa campagne qui a pour but de semer un peu de bonheur dans les foyers nécessiteux de son milieu au temps des Fêtes.

En effet, M. Eric Dexter, depuis huit ans déjà, consacre dix jours de son congé annuel à aider les familles dans le besoin de la capitale du Manitoba en leur procurant des aliments et des cadeaux. Sa grande famille à lui, en cette période de l'année, c'est la classe pauvre de son milieu. C'est en atténuant la misère des autres au temps des Fêtes qu'il trouve son propre bonheur.

Au cours des quatre dernières années, M. Dexter a dirigé l'exécution du programme du Service social de l'église anglicane qui relève du Christmas Cheer Board, agence de la Fédération des œuvres de Winnipeg.

Interrogé, M. Dexter nous a précisé

que cette œuvre prenait des proportions de plus en plus considérables.

«Nous sollicitons des dons de conserves alimentaires, de jouets et d'argent par l'entremise de communautés paroissiales, de personnes, et d'associations», a-t-il déclaré.

«Le tri des marchandises et la préparation des paniers destinés aux personnes dont les noms figurent sur des listes qui nous sont fournies par le Christmas Cheer Board se font dans une salle paroissiale», de poursuivre M. Dexter. «Notre aide est accordée à toute personne, quelle que soit sa religion, bien que nous nous occupions de toutes celles qui appartiennent à la religion anglicane.»

En plus de s'occuper des dons de marchandises, M. Dexter voit également à l'achat des articles d'épicerie et des jouets ainsi que des dindons, poulets et jambons dont chaque panier est pourvu.

L'an dernier, à Noël, 35 communautés

paroissiales du Grand Winnipeg ont participé au projet. M. Dexter devait alors diriger 30 emballeuses bénévoles, 6 hommes et adolescents occupés au transport des paniers et au chargement des voitures et environ 120 hommes et femmes qui livraient aux nécessiteux les paniers remplis d'aliments et de sucreries.

«Lorsque la fumée s'est dissipée et que nous avons fait le bilan de notre œuvre, nous avons constaté que nous avons emballé et livré 693 paniers et aidé ainsi 3,010 personnes, dont 2,200 enfants et adolescents qui reçurent en outre des cadeaux. Le budget de l'œuvre s'établissait à \$5,200, sans compter les dons de marchandises et de jouets.»

Qu'est-ce qui motive M. Dexter?

«Les nombreuses lettres de remerciements qui me parviennent après les Fêtes semblent toujours justifier la nécessité de l'œuvre et m'y ramènent l'année suivante», nous a-t-il répondu.

**'tempt us not,
dear winter,
duty calls us south...'**

by William Dunstan
Information Services Division

Last February, while the joys of winter still were available to sneezing Canadians, it was rumored that screams of protest were heard as three members of D.O.T. were pushed aboard a departmental aircraft bound for the West Indies.

Sentenced to a two-week ordeal in the Leeward and Windward Islands, a string of a dozen green, spice-scented ocean gems strung about the eastern edge of the warm blue Caribbean Sea were two members of the Construction Engineering and Architectural Branch—D. A. Lane, chief engineer, and Dr. G. Y. Sebastyan, chief of engineering design—and J. M. West of the flight standards and regulations division of the Civil Aviation Branch.

Their task was to prepare a study paper with recommendations for an airport system framework which would not only meet the short-term needs of the islands but also provide a sound basis on which long-term airport development concepts could be planned.

Undertaken for the external aid office the assignment was confirmation of the high place our air services experts have in international circles and, of course, an important contribution to Commonwealth relationships. (These islands, formerly British possessions, are entering independence within the Commonwealth.)

These tropical paradises, as the travel brochures call them, are part of the Lesser Antilles and include St. Lucia,

Petit Piton thrusts up from the sea in emerald splendor.



St. Vincent, Grenada, Dominica, Antigua, St. Christopher (St. Kitts), Montserrat, Nevis, Barbuda, Bequia, Carriacou, and Anguilla.

There are airfields on most of the islands, but some are located in difficult terrain and are unsuited to other than light aircraft.

At St. Vincent, for instance, the Department's Baron provided a few exciting moments crossing a mountain that stands permanently in the path of any aircraft that has to take off inland.

Having survived the trip, the group has produced a detailed and intensive study of physical and economic factors in which it is indicated that tourist traffic will continue to grow and make feasible the expansion of air services.

It is only a preliminary evaluation study which will have to be supported by extensive technical studies before implementation.

It is understood, however, that the group is willing to undertake any additional studies required—even in winter.

world weather watch

by J. R. H. Noble, Director,
Meteorological Branch, Department of Transport

Described as the most ambitious and challenging undertaking ever conceived by the World Meteorological Organization, World Weather Watch is a long-term experiment in international co-operation that gets underway in 1968. Here, condensed from an address delivered at the Canadian Meteorological Society's First Annual Congress in Ottawa recently, a Canadian authority discusses the concept.

World Weather Watch is the name given to the integrated world wide system for meteorological observation, weather services and research conceived and planned by W.M.O. The system will be made up of the present world system augmented by facilities for the acquisition of additional basic data, by improved telecommunications and data processing facilities and further supported by research and training.

The plan, which is scheduled for implementation during the period 1968-71, recognizes the probability of new advances in such areas as the use of satellites for both sensing and communications, of automatic stations and of constant level balloons.

It further recognizes the importance of developing physical-mathematical procedures to simulate the behavior of the atmosphere which are much more complex and realistic than are now available. Accordingly, the present plan envisages the incorporation of the products of these advances as they become operationally applicable.

Historically, World Weather Watch emerged as WMO's response to the resolution passed by the General Assembly of the United Nations on "International Co-operation in the Peaceful Uses of Outer Space".

Information required by nations includes both meteorological observations and processed data. For operational work, the information must be received in a timely and co-ordinated fashion while for research purposes the information must be readily accessible in convenient forms.

Essential Elements

It follows that the essential elements of World Weather Watch are:

- 1) Observational networks and other observational facilities, called the Global Observing System;
- 2) Meteorological centres and the arrangements for the processing of the observation and for the storage and retrieval of data, called the Global Data Processing System; and
- 3) Telecommunication facilities and arrangements necessary for the rapid exchange of the observations themselves and of the processed data, called the Global Telecommunications System.

A further very important purpose of World Weather Watch is to stimulate and facilitate the research work which is necessary to improve the understanding of the processes taking

place within the earth's atmosphere, which introduces a further element of WWW, namely:

- 4) The research program.

One of the most serious obstacles towards the achievement of all the above objectives is the lack of sufficient skilled meteorological personnel of all classes in many countries. The successful implementation and operation of World Weather Watch, therefore, depends on yet another element:

- 5) Education and training.

In broad terms, the initial phase of the WWW plan will seek to achieve by 1971:

- a) Substantial improvement in the Global Observing System to provide better and more complete data for meteorological analysis and forecasting;
- b) Implementation of the Global Data-Processing System;
- c) Improvement of the Global Telecommunication System.

Global Observing System

The present global observing system is principally deficient over most ocean areas, in the tropics and in remote land areas.

To remedy these deficiencies, extension of conventional observing networks and deployment of meteorological satellites and other new observing tools will be used to ensure a more homogeneous distribution of meteorological observations on a global basis.

The present North Atlantic and other ocean weather stations should be retained without reduction in number or program, regardless of any reduction in the direct utilization of the stations for aeronautical purposes, until such time as completely satisfactory and proven alternative observing systems are available which could maintain in full the necessary regular reliable data output. New stations should be established in critical locations where essential meteorological observations cannot be obtained by more economical means.

As a first step, between five and 10 additional fixed-ship ocean weather stations should be established, mainly in the Southern Hemisphere.

Substantially increased use should be made of mobile ships for obtaining surface and upper-air observations over ocean areas, especially in the Southern Hemisphere. By the end of 1971, there should be a total of at least 100 ships taking upper-air observations in addition to a normal surface observing program.

To meet the vital need for surface observations from ocean areas, the present selected ship program should be substantially increased and, if possible, doubled during the period 1968-71.

Commercial aircraft still constitute a valuable source of upper-air data, especially over the oceans and other sparsely inhabited areas and the selection and distribution of such reports should be developed as an integral part of the plan.

Meteorological satellites already provide, on an operational basis, valuable data on the extent and character of the global cloud cover. Much improved meteorological satellites will likely be in orbit during the period 1968-71. These satellites are expected to provide data on cloud distribution during both day and night and certain other global atmospheric parameters for operational purposes.

Global Data-Processing System

The Global Data-Processing System envisaged under WWW consists of a system of World, Regional and National Meteorological Centres. It is important to recognize that while WMC's and RMC's will operate in support of NMC's in no way will they control or dictate the manner in which NMC's go about fulfilling national needs.

In broad terms, the GDPS is aimed at securing maximum efficiency in the utilization of manpower and facilities. WMC's will concentrate on global type of products primarily describing large-scale synoptic phenomena whereas RMC's will concentrate on continental or sub-continental type products.

By making use of processed data so provided, many nations will find it possible to concentrate a greater part of their efforts on expanding the current weather services with emphasis on meso-scale analysis and forecasts. Each nation determines within relatively wide limits which products it will require from WMC's and RMC's.

WMO has recognized three WMC's—Washington, Moscow and Melbourne. The first two are already operational to a substantial degree while the third is still in the planning stage.

Global Telecommunications System (GTS)

The purpose of the improved Global Telecommunication System during the period 1968-71 will be to collect and distribute raw observational data to national, regional and world meteorological centres and subsequently to distribute the resulting processed information to other WMC's, RMC's, and NMC's.

The present communication system is inadequate to provide essential services to all countries. During the period 1968-71, countries should seek to install jointly a reliable global circuit which will interconnect all regions and have sufficient capacity to exchange the meteorological data and products required.

The Research Program

Scientific research will primarily be the responsibility of individual nations. The role of WMO will be that of assisting in the co-ordination of research activities.

As a concrete step toward making WMO's role effective, the organization's fifth congress reaffirmed the importance of close collaboration between WMO and the International Council of Scientific Unions and further approved a resolution covering a WMO/ICSU agreement for a jointly-sponsored Global Atmospheric Research Program.

Education and Training

Discussions at the fifth congress of WMO highlighted the vital importance of accelerating and expanding activities in the field of education and training.

It is absolutely essential to the success of WWW that these activities be given top priority particularly in the developing countries.

In support of these undertakings, the fifth congress approved an amount of \$500,000 in the regular WMO budget for the four-year period 1968-71 to be used for long-term fellowships.

In addition, developing countries were urged to take advantage of resources available through the United Nations

Development Program and where possible to secure support through bilateral arrangements with developed countries.

Canada's Position

Canada is on record as being in full support of the WWW plan. Our national plans include proposals for improving data-acquisition networks to a level which at worst even in isolated areas will meet the minimum specifications laid down for WWW and in most parts of our country will be substantially better than the minimum.

Canada endorses the concepts inherent in the integrated world-wide system of data-processing and will continue to participate in the further development.

I am sure those familiar with our national Weather-Central/Weather Office organization will recognize a striking similarity between our national organization and the WWW global concept of WMC's, RMC's and NMC's.

At this stage it is not possible to specifically identify our precise relationship to, and degree of participation in, the Global Data-Processing System. The matter is, however, being actively studied.

Canada proposes to improve the national meteorological data communications system in a manner which will be consistent with both our own needs and with the WWW plan. Approval in principle for a major improvement is already available and detailed plans are being developed.

It goes without saying that we in the national service view with enthusiasm the action taken by WMO in support of a global atmospheric research program. It is premature to attempt to specifically identify a role in the program. However, it is obvious that Canadian meteorologists will find a place at the appropriate time.

As mentioned earlier, WWW is to be implemented primarily through national programs executed by individual nations using their own resources. Developing countries will be assisted through UNDP to which Canada makes substantial contributions. Canada has provided and is ready to continue to provide assistance to developing countries under bilateral arrangements through the External Aid Office.

There are reservations about the "Voluntary Assistance Program" recently approved by the fifth congress but for the present at least, it will probably be our policy to adopt a "wait and see" approach.

Summary

In summary, taking a broad view, WWW means many things to many people.

To some, it is a means of highlighting an awareness of the benefits which may accrue to mankind through applications of meteorological services.

To others, it means a contribution to the science of meteorology through improved knowledge of how the atmosphere behaves.

To still others, it means more effective operations through better observational coverage, improved communications and more effective data processing.

Hopefully, WWW could narrow the gap between the level of operations of developed and developing services.

The WWW plan can be considered as a framework or guide which outlines courses of action or strategies that nations can follow in the development of effective and efficient national meteorological services through a co-ordinated, international scheme of co-operatively sharing skills, knowledge and resources.

The next four years are crucial in that for continued support in personnel, material and financial resources, the benefits of WWW must be demonstrated during this period.

routine aerial study sparks rescue at sea

In terms of coincidence, few search and rescue operations can compare with the experience of a team of D.O.T. employees who came across a burning cabin cruiser last summer while on a routine flight over the coast of British Columbia.

It all started during the course of a special study of small boat harbors in British Columbia, being carried out by Dr. Thomas How, formerly regional director of air services at Vancouver, prior to assuming his new post as deputy director of air services in Ottawa.

On June 28, Airways Inspector Bob Smith and Engineer Don Roberts were flying Dr. How over the Campbell River area in a D.O.T. Beaver so that he could take aerial photographs to support his report when they ran out of film and decided to fly to Comox for a fresh supply.

Enroute, they noticed a plume of smoke rising from the water about 10 miles distant and decided to investigate. The events that followed are taken from Inspector Smith's report:

"Upon reaching the smoke, we observed a burning cabin cruiser situated approximately four miles off the shore and halfway between Comox and Campbell River.

"Comox tower was immediately alerted to get the Search and Rescue helicopter over to the scene to pick up survivors. They advised that the helicopter was unserviceable but an Albatross preparing to take off on a training mission would be diverted to the scene.

"Since no sign of life was evident near the boat, which was burning fiercely by this time, a search downwind from the vessel was commenced. The Albatross joined the search just as the vessel exploded and sank.

"With the sea as rough and cold as it was, it was not likely a person would last too long. The aircraft was prepared for a landing and the search continued downwind, with the Beaver at 300 feet and the Albatross at 600 feet. About this time a fishing boat must have noticed all the commotion as one was heading over to where the boat had sunk.

"Comox then advised the helicopter was serviceable and subsequently despatched. It arrived and was hovering over the spot where the boat went down looking for anything of interest and dropping smoke flares to mark the site.

"We were circling at 90 degrees to the surface wind along the tide line (which was evident by much driftwood) when a hand was seen waving in the water. As mentioned previously, the water was quite rough with white caps and foam streaks and it was only by sheer good luck that the survivor was spotted.

"As a matter of interest, he was approximately one quarter mile from his boat at right angles to the surface wind. Being low in the water, the tide obviously had a greater effect on his body than the wind.

"The helicopter was alerted that someone was in the water and our aircraft was positioned over the survivor to give them a bearing. Hovering just over the water, two of their para rescue team jumped in and took the survivor in tow. The fish boat "Ideal" was near by this time and picked the three men up.



Dr. T. G. How

Survey saved a life

"The Albatross then tried to get through by radio to the fishing craft to see if any more people were likely to be in the water. In the meantime, the search was continued along and downwind from the tide line where the lone survivor was spotted.

"Eventually, it was determined by radio that there were no other passengers on board, the search was terminated and we proceeded to our destination."

Later it was learned that the survivor was a retired air force wing commander when he wrote to thank the D.O.T. crew the following letter:

"Dear Inspector Smith:

"I regret not writing you sooner to thank you for your most effective participation in my rescue on the morning of 28 June, but I've been drying out and practising swimming.

"During my 27 years of air force service, I was always a 'fighter jock', but I can assure you a Beaver viewed from the briny is a very pretty aircraft as is the Labrador twirling above your head.

"Watching the three planes and the fishboat "Ideal" concentrating their attention on my burning vessel, I was becoming concerned that I would not be spotted, particularly among all the debris I knew was floating around me.

"The fact that I hadn't a life jacket on and was wearing a dark grey sweater added to my concern, but I had 'bailed out' too fast to grab a jacket and eventually became too tired to attempt to remove the sweater. Your spotting me under these conditions is miraculous and your eyesight should guarantee many happy years as a pilot.

"Again I thank you and hope some day our paths may cross in order that I may do so personally.

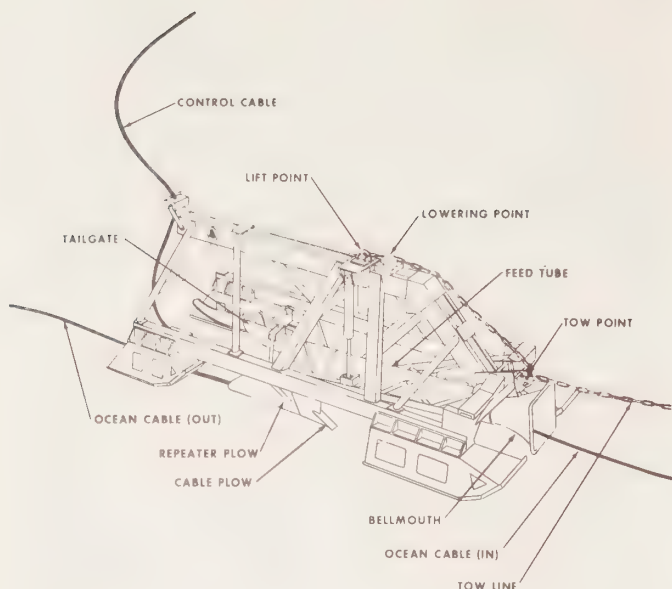
"Yours sincerely," the letter was signed,

"W. L. Drake, W/C (ret'd.)"

A footnote to the story mentions that Dr. How regretted that he didn't have any film to take a picture of the rescue, to which Inspector Smith is reported to have replied: "If we'd had the film, there might not have been a rescue."

operation sea plow

by Walter Foster
Chief Testing Officer
Canadian Overseas
Telecommunication Corp.
St. John's, Newfoundland



SEA PLOW

CANADA HELPS OUT—An architect's drawing of the Sea Plow, conceived and built by Bell Systems' engineers in the United States, shows how the device is designed to cut a shallow trench in the seabed and bury trans-Atlantic telecommunications cable to protect it from damage by fishing nets and dredgers. The accompanying photo shows the Sea Plow being lowered over the side of CCGS John Cabot, a unique icebreaking and cable repair ship whose qualities best fitted it for the delicate job of pulling the Sea Plow over more than 100 miles of seabed.

LE CANADA PRÊTE SON CONCOURS—Aux États-Unis, des spécialistes de la compagnie de téléphone Bell ont construit une immense «charrue sous-marine» qu'on utilise dans les profondeurs de l'océan pour enfouir les câbles servant aux télécommunications transatlantiques. Cette charrue, qu'on aperçoit dans les photos accompagnant ce reportage, mesure 24 pieds de longueur par 11 pieds de largeur et pèse 14 tonnes. Elle a été utilisée la première fois en juillet dernier pour enfouir une centaine de milles de câbles dans le lit de l'Atlantique, à partir de la côte du New Jersey. La Garde côtière canadienne a joué un rôle important dans ces travaux. Un de ses navires, le brise-glace-câblé John Cabot a agi comme remorqueur au cours des opérations. Dans une des photos, on voit le navire canadien à l'œuvre. Des membres de l'équipage s'apprêtent à descendre la charrue à l'eau. Dans le passé, les câbles transatlantiques situés à cet endroit ont souvent été brisés ou endommagés par des dragues et des filets de pêcheurs. A l'aide de la charrue, remorquée au fond de l'eau à des profondeurs allant de 120 à 900 pieds, on a creusé une tranchée et enfoui les câbles à 18 pouces dans le lit de l'océan.

Captain D. S. Tosh, master of the CCGS *John Cabot*, made contact with his support craft off the coast of New Jersey. It was July 5, 1967 and the rendezvous was the result of seven years of study and research, theories pursued and formulated at drawing boards and in laboratories, tested on land and tried at sea.

The aim? To plow a trench in the seabed and simultaneously lay submarine cable.

The continents of the world are linked by a global network of submarine cables snaking across the seabed and emerging at terminal stations on land.

While cable which lies in the ocean's depths is safe from man's interference, that which traverses the continental shelves is continually in jeopardy from commercial fishing operations.

Damage to a cable results in loss of communication vital to statesmen, commerce and industry, and the private individual.

Repair operations are expensive and are sometimes unavoidably protracted. All systems may be "go", with ships and men standing by to effect an efficient repair when suddenly weather conditions worsen and the delicate procedures on which the repair depends are delayed.

As long ago as 1938, cables were buried off the coast of Ireland by the Western Union Telegraph Company. Secure beneath a protective layer of sand, mud and rocks, these buried cables were safe from man's interference.

While the method proved practical in that instance, albeit with relatively primitive equipment and only limited knowledge of the seabed, there was no guarantee it would be effective in other areas and the outbreak of war in 1939 brought to a halt any further work in this field.

Post-war boom

The post-war era brought an enormous increase in all types of commercial fishing on both sides of the Atlantic. Canada, the United States, Europe and Asia sent fishing craft to reap the rich sea harvest off the Eastern Seaboard. As fishing activities expanded on the continental shelf, damage to submarine cables inevitably became more frequent.

Off the coast of New Jersey lies a rich clay seabed where scallops thrive and where, naturally, the area is a prime target for scallop-dredgers.

It so happens that two multi-channel transatlantic cables linking America directly with France and Britain terminate in this area at Tuckerton, N.J., and despite all the efforts of scallop-dredgers to avoid damaging these cables, some

Two transatlantic telephone cables off the New Jersey coast have been damaged in the past by commercial fishing nets and dredges and despite a variety of efforts to keep the cable routes free, breaks have occurred, resulting in service disruptions and costly repairs. The solution to the problem was found by the American Telephone and Telegraph Company and involved the Canadian Coast Guard Ship John Cabot. Here, one of the men who was engaged in the project tells about it.

breakdowns in communication have occurred and a means to prevent such interruptions had to be found.

Encouraged by Western Union's pre-war work in burying cable, the American Telephone and Telegraph Company of New York requested Bell Telephone Laboratories to investigate the prospect of a cable-burying project off the New Jersey coast.

The project, if successful, would ensure continually uninterrupted voice communication with Europe.

Armed with experience in land cable plowing and oceanographic surveys, the Bell System accepted the challenge. A plow which could be towed across the seabed was designed.

Weighing 14 tons, this vehicle is 24 feet long, 11 feet wide and nine feet high. The plowshare is coated with an extremely tough, abrasion-resistant metal. The vehicle is fitted with floodlights and TV cameras, with flashlights and still cameras, hydrophones, hydraulic equipment for raising and lowering the plowshare.

Cable is buried

Along the length of the vehicle is a feed tube. The telephone cable passes through this tube, emerging at the rear to fall into the trench made by the plowshare. A tailgate enables bulky, signal-boosting repeaters in the cable to pass through the tube.

A towing cable with a breaking strain of 105 tons and a telemetering control cable join the vehicle to the surface ship.

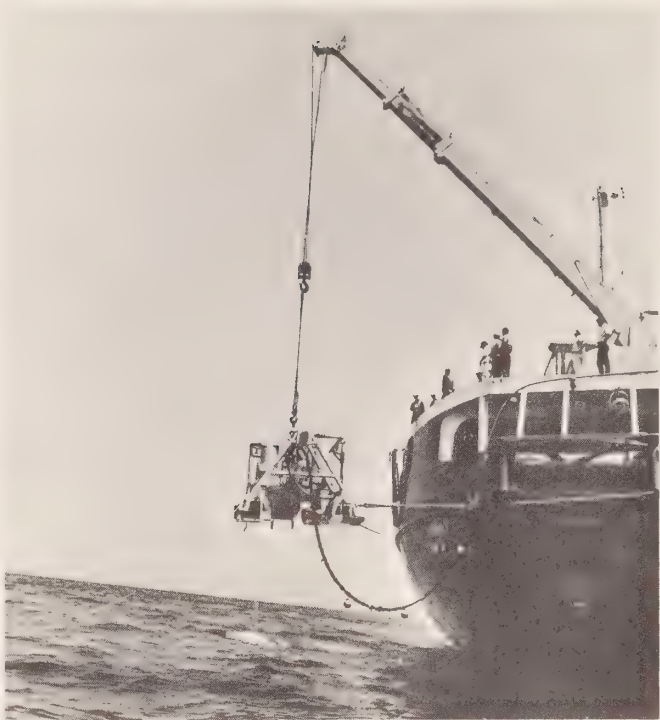
This ship must be an extremely specialized craft. It must be a highly stable platform. It must be manoeuvrable. It requires terrific main engine power in order to tow the vehicle. The hull strength must be adequate to sustain the weight of a heavy lift crane, a towing winch, and the vehicle while in transit. It needs complex electronic equipment to control the vehicle. It must be equipped to transport and lay telephone cable. It must be manned by professional seamen.

Canada has cause to be proud that CCGS John Cabot was chosen by A.T. & T. as suitable to perform these special functions.

The John Cabot, which usually operates from St. John's, Nfld., is unique in that she is an icebreaking cable repair ship and the only ship that can do this type of work in heavy ice conditions.

The ship's unique capabilities earned a special place for it in marine history when a submarine cable in Baffin Bay broke just southwest of Thule, Greenland, in November 1965.

Called in to try to repair the break, the John Cabot accomplished the seemingly impossible in 12 hours despite extremely adverse ice and weather conditions, a feat which won for it



the American Air Defence Command "Shield of Freedom" which was presented to Captain George Burdock, then its master, in a special ceremony in Montreal in July of 1966.

Cabot heads south

Last fall in St. John's, modifications were made to the ship's hull to prepare her for her gigantic undertaking and she weighed anchor in October to steam south and take aboard the heavy crane and the plow vehicle prior to commencing exploratory sea trials for the burying project, under the supervision of Bell Systems' personnel.

Although the weather was not conducive to extended trials, her tests proved sufficiently encouraging for the scientists to forge ahead with further modifications to the ship and the underwater vehicle. Operations were then suspended until the spring of 1967.

In May of this year, CCGS John Cabot slipped her moorings once again to head south, first call New York. There, a complex of electronic equipment was installed by Bell engineers. Cable was loaded, the modified plowing vehicle was landed on her afterdeck and all systems were checked out alongside the wharf.

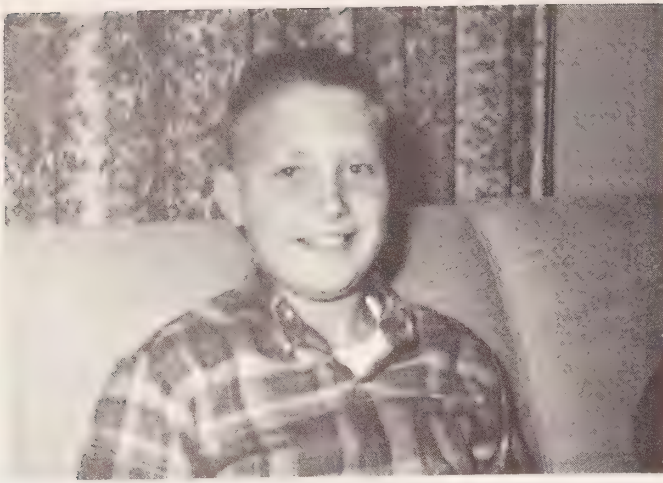
Along the course John Cabot would be towing the vehicle, a midget submarine was surveying the seabed, checking for obstacles. A host of support craft was gathering in the operations area, among them two ocean-going tugs, a scuba-diving tender, and the British cable ship Stanley Angwin.

The John Cabot left New York to join them and four weeks of extensive trials were completed, involving the launching of the vehicle, the manoeuvring of it while it was on the seabed, the ploughing and burying of the telephone cable, the locating of a simulated broken cable by electronic detectors, the recovery of such a cable, and the co-ordination of work by a skin-diving team to manhandle the vehicle.

After a trip to Baltimore in late June, the Cabot loaded cables and repeaters required for her burying project and sailed to keep her historic appointment on July 5.

The ship completed burial operations on July 15th, inserting 40 miles of new cable into one communication system out of Tuckerton and nearly 60 miles into the other system.

Mission accomplished.



'Dear Sir: I'd like to buy your island.'

Have you ever thought you might like to buy an island?

An 11-year-old Lancaster, Ohio, boy thought about it enough to write the Department of Transport and offer \$7,270 for Sable Island, a D.O.T. outpost located 200 miles off the Nova Scotia coast.

"I have been looking at Sable Island for several months and I have been thinking I might like to buy it—that is, if you would sell it," wrote Tom Gander in a letter that came to the attention of W. F. Whitman, general manager of the Real Estate Branch.

Tom added that, while he couldn't afford to buy it for several years and while he wasn't sure of the price, "I thought you might sell it for \$7,270 under special terms."

The terms were set down as:

- 1) Residents of the island will remain and live as usual.
- 2) Food will be brought to the ponies every winter.
- 3) Life-saving stations will be kept in use, repaired and improved if necessary.
- 4) Improvements will be made to the island.
- 5) A new lighthouse will be built.
- 6) Canada's government boats will still visit the island.

"You may think these are useless terms, so I will ask you to add some of your own if you like," said Tom.

Mr. Whitman, in declining Tom's offer with thanks, wrote back that while he appreciated it, he was sorry to say that the island "is not for sale at this time."

But, he added, "your name will be on record if at some later date the island does become surplus to our requirements and can be sold."

Sable, a 25-mile-long by one-mile-wide piece of sandy real estate, has little value according to the Real Estate Branch.

Known as the "Graveyard of the Atlantic" because of the number of ships that foundered on or near it, the island has only a small complement of D.O.T. personnel who man its two lightstations and solitary weather observing station, and about 200 wild ponies who roam its desert-like wastes.

Why, then, would an 11-year-old boy be interested in the island? "The DOT" wrote to ask Tom, and how did he arrive at a price of \$7,270?

"I first became interested in buying an island," replied the youthful entrepreneur "when I decided I would like to design machines and buildings as Tom Swift, the story character, does."

"I would want an island with little or no population. It could not be valuable land, because I would want to buy it for a low price. Sable seemed perfect for it had a low population and the island itself was not of very fertile land. Its location was favorable also. I did not want an island in the Pacific as it was so far away. The Atlantic location was closer and easier to get to."

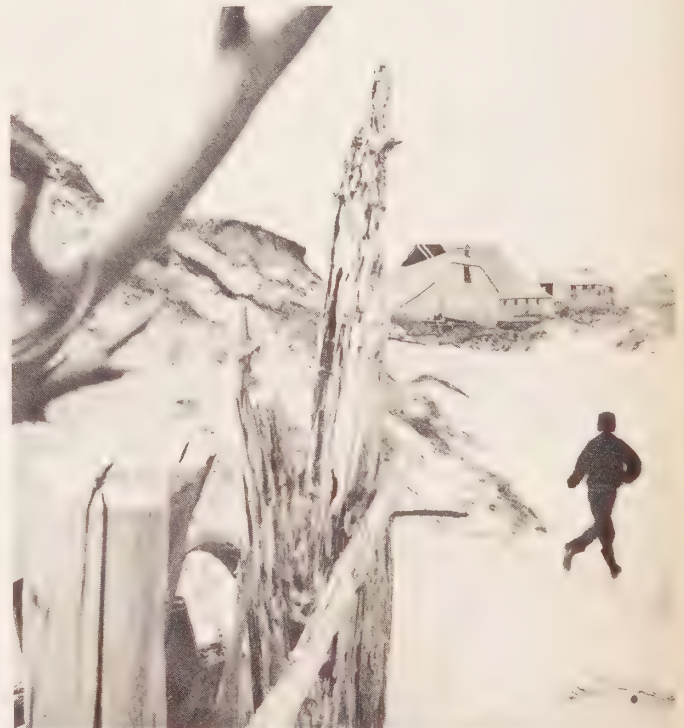
Tom said he had found out about Sable Island in the World Book Encyclopedia and the National Geographic.

"I wanted to find out how many acres Sable was, so I divided and multiplied to change miles to acres. I was going to pay five dollars an acre, so I multiplied five dollars by the number of acres. I am still not sure if my answer was right. I had not figured on the price of the lighthouses."

Tom added that he likes to read and go fishing with his father, sometimes in Maine.

"I collect coins and stamps and I will soon be a boy scout. I also like to swim and I have just won three ribbons. I am in the local Soap Box Derby this summer and I hope to win it."

The letter was signed "Sincerely yours, Tom Gander."



Young islander at play



Captain Paul Tooke

One Man's Centennial Project

'LEST WE FORGET'

by Bryan Goodyer
Information Services Division

Twenty-two years ago a merchant ship named the S.S. *Point Pleasant Park* was torpedoed off Cape Town, South Africa and went down with the loss of nine lives.

It was a chilling experience that Paul W. Tooke, one of the 28 survivors and now master of the Canadian Coast Guard Ship *Edward Cornwallis*, can never forget.

His determination that others should never forget resulted in what became a Centennial project, the erection of a 10-foot-high stone cairn that stands today on a high rise overlooking Halifax Harbour in the park after which the ship was named.

"Each week, passing the park on my way down to the harbour, I remember the happy ship which carried its name halfway around the world and I wonder how many people in Halifax knew she existed and how she met her end," recalled the veteran seaman recently.

Capt. Tooke, who was instrumental in getting the project underway, saw his dreams for a permanent memorial to the men come true last July when a silver-haired grandmother from Owen Sound, Ont., the mother of one of the men who was lost, removed a maple leaf flag draped over the monument as 22 relatives and survivors of the original crew watched in silence.

The lady was Mrs. Albert Breen, 74, who lost her 29-year-old son Fred in the sinking of the vessel. Mrs. Breen was escorted during her visit to Halifax by Capt. Tooke and Gordon Smith, chairman of the Point Pleasant Park Commission.

Also attending the brief but moving ceremony were Lieutenant-Governor H. P. MacKeen, Dr. Stanley Haidasz, parlia-

mentary secretary to the minister of Indian Affairs and Northern Development, and Halifax Mayor Allan O'Brien.

As Mrs. Breen removed the flag from the monument, Capt. Tooke's ship, the *Cornwallis*, gave three blasts of her horn—the international sailors' salute—from the harbor below.

The inscription on the cairn's dedication plaque reads: "This cairn is dedicated to the memory of these gallant and unsung men of the Merchant Navy, and to the happy ship in which they served Canada and died for her freedom."

Below the inscription were the names of the nine crew members of the S. S. *Point Pleasant Park* who were lost.

In a brief address to the gathering, Capt. Tooke said the story of the ship "has laid buried in our sea chest for 22 years" and paid tribute to the men in the words of Sir Winston Churchill as "gallant, unsung men."

The Point Pleasant Park was a 10,000-ton vessel, one of 174 "park" ships built to carry war material and food supplies from Canada to the theatres of war throughout the world.

Torpedoed on Feb. 23, 1945, Capt. Tooke, who was then third officer aboard the ship, and 27 other survivors of the sinking, were finally rescued 10 days later after they had drifted over 400 miles in lifeboats before being picked up by a South African ship.

For the Coast Guard officer, it was the second time during the war that he had been torpedoed. The first sinking he experienced was as a member of the crew aboard the lake freighter *Donald Steward* in 1942.



Le n.g.c.c. «Nicolet» constitue évidemment un des plus importants outils dont dispose la Division du chenal maritime du St-Laurent dans ses travaux d'entretien et d'amélioration du chenal. Ce navire de sondage est équipé de l'outillage le plus moderne qui soit pour balayer le lit du chenal et déceler les obstacles qui pourraient s'y trouver. Le balayage se fait à l'aide d'une barre d'une quarantaine de peids de longueur suspendue sous le navire. Lorsque la barre rencontre un obstacle quelconque, son déplacement vertical est enregistré sur un indicateur installé sur la passerelle du navire. On est ainsi en mesure de déterminer la hauteur et l'endroit précis de l'obstacle rencontré. Dans cette photo, on voit la barre de balayage attachée à la proue du navire.

Le «Nicolet», précieuse acquisition de la Garde côtière canadienne

par Edouard Deslauriers

Services d'information

Une des plus récentes acquisitions de la Garde côtière canadienne, le «Nicolet», navire de sondage moderne équipé d'un outillage spécialement conçu pour repérer les obstacles à la navigation dans le chenal maritime du Saint-Laurent, a abattu une tâche énorme depuis qu'il a été mis en service au début de cette année. Il s'est révélé un outil des plus précieux dans le travail indispensable qu'on poursuit sans relâche pour assurer la sécurité de la navigation dans le Saint-Laurent, cours d'eau historique qui, depuis l'époque des premiers explorateurs, joue un rôle de première importance dans l'expansion économique et industrielle du Canada.

Comme première mission, peu après sa sortie des chantiers de Collingwood Shipyards au printemps de cette année, le «Nicolet» a été chargé de patrouiller les eaux du voisinage de l'Anse-au-Foulon en prévision de l'arrivée à Québec du paquebot «France». Ce navire, l'un des plus immenses paquebots qui ait jamais remonté le fleuve jusqu'à Québec, a accosté sans peine à l'Anse-au-Foulon, le 9 mai dernier.

Pendant plusieurs semaines avant l'arrivée du «France», le «Nicolet», à l'aide d'une barre de balayage suspendue sous le navire, a sondé le lit de la rivière sur toute sa largeur, y repérant les obstacles qui auraient pu nuire au passage du paquebot. Son travail n'a pas été inutile. On a découvert en effet que le chenal à certains endroits n'avait pas les profondeurs requises. On a donc fait appel aux dragueurs qui ont enlevé plusieurs tonnes de vase et d'autres matières sédimenteuses aux endroits indiqués.

Le «Nicolet», habilement piloté par le capitaine Gabriel Carré, compte un équipage expérimenté de 27 membres. D'une longueur de 166 pieds et demi et large de 35 pieds, il a un tirant d'eau en charge de 9 pieds et six pouces. Facile à manœuvrer, il peut se déplacer à une vitesse maximum de 13 nœuds.

Jusqu'à maintenant, il a été particulièrement utilisé dans la section du fleuve s'étendant entre Portneuf, en amont de

Québec, jusqu'aux environs de l'embouchure du Saguenay. Au cours des mois d'été, on l'a vu à l'œuvre dans la rivière Saguenay entre Saint-Fulgence et Chicoutimi. A cet endroit, il a effectué un sondage complet du lit de la rivière sur une distance d'une douzaine de milles. Ces travaux ont eu pour but d'établir dans cette section du fleuve une profondeur de 20 pieds à l'étiage. Les opérations de sondage se poursuivront à cet endroit à intervalles réguliers afin de maintenir la profondeur requise à 20 pieds.

Entièrement construit en acier soudé, le «Nicolet» a été spécialement renforcé pour la navigation dans les glaces. C'est dire qu'on peut se prévaloir de ses services même pendant les mois d'hiver.

Au cours des derniers mois, il a été appelé à sonder et balayer le lit du chenal sud du fleuve en aval de Québec en prévision de la réouverture prochaine de ce chenal à la navigation. On sait que le ministère des Transports, pour des raisons de sécurité, a décidé de réaménager le chenal sud de façon à ouvrir deux voies à sens unique pour les navires remontant et descendant le fleuve à cet endroit. C'est un travail d'envergure qui ne sera vraisemblablement complété que dans cinq ans.

Le «Nicolet» s'est donc déjà adonné aux travaux préliminaires entrepris dans la section du chenal sise entre Québec et un point en aval de l'Île-aux-Coudres. On sait qu'on propose à cet endroit de porter la largeur du chenal sud à 1,000 pieds et sa profondeur à 35 pieds à l'étiage.

Selon les ingénieurs de la Division du chenal maritime du Saint-Laurent, le «Nicolet» parvient à accomplir les tâches les plus variées et les plus difficiles avec beaucoup d'aise. La facilité avec laquelle il surmonte les situations les plus difficiles rencontrées sur son chemin en fait un outil précieux pour le ministère qui cherche constamment à améliorer par tous les moyens possibles ses services à la navigation dans le Saint-Laurent.



Une phase des opérations dans le chenal maritime consiste en des travaux d'arpentage à divers endroits sur les deux rives. Une équipe d'arpenteurs quitte donc le «Nicolet» à bord d'une embarcation dans laquelle on a disposé tout l'outillage dont on aura besoin pour les travaux sur terre.



Cet appareil, installé sur la passerelle du navire de sondage, sert à enregistrer la hauteur exacte et l'endroit précis des obstacles repérés au fond du chenal maritime à l'aide de la barre de balayage suspendue sous le navire. Dans cette photo, l'ingénieur Jacques Gosselin vérifie les données enregistrées sur l'indicateur.



Dans la «salle de pointage» à bord du «Nicolet», des ingénieurs se penchent sur la table de travail où, à l'aide des données recueillies par l'indicateur de sondage installé sur la passerelle, ils indiquent sur une carte marine les endroits précis où des obstacles ont été repérés dans le chenal maritime. Ces renseignements sont ensuite transmis aux dragueurs qui verront à supprimer l'obstacle constituant un danger à la navigation.

RETIREMENTS

C. M. Brant

Cecil Mornington Brant, Deputy Director of Air Services for the past six years and a veteran of more than 28 years' service with the Department of Transport, has retired.

Born at Holbeach, England, Mr. Brant received his early training at Chesterfield and later graduated from the London Polytechnic Institute.

He received his first training in radio at the Royal Air Force training school at Winchester and later attended McGill University, Montreal, in 1944 for post-graduate studies in electron physics and electrical engineering.

From 1926 to 1932 and from 1942 to 1946, Mr. Brant was in the RAF where he was successively senior signals officer, British West Indies, telecommunications engineering officer for the North Atlantic area and deputy chief signals officer at Montreal.

He retired from the air force with the rank of squadron leader.

In 1937, while an employee of the British Air Ministry, he was sent to Newfoundland to supervise construction of radio communications to set the stage for trans-Atlantic commercial aviation, first at Botwood and later at Gander.

Mr. Brant came to the Department of Transport on April 1, 1949, when Newfoundland joined Confederation.

He was appointed superintendent of radio regulations in 1953, named controller of radio regulations in 1956, made chief of technical and policy co-ordination in 1958, and appointed to his present post on Aug. 2, 1961.

Mr. Brant was honored by some 200 friends and colleagues from all across Canada at a reception and dinner last Sept. 28 in the International Ballroom of the Skyline Hotel in Ottawa.



Miss Olive K. Anderson

A girl who served the Department of Transport in the Air Regulations Division for more than 30 years has retired.

Miss Olive K. Anderson was given a staff farewell and presented with gifts that included a table lamp and a travel alarm clock at a ceremony in the Winnipeg regional office of Air Services last July 26.

Among those extending their congratulations were W. E. Fenn, regional director of air services at Winnipeg, and J. D. Craton, regional superintendent of air regulations.

Miss Anderson started work in November 1930 with the civil aviation division of the Department of National Defence.

She was transferred to the Department of Transport at its formation in 1936.

F. Richards

A man who says he plans to "just putter around for awhile" has retired from the Department of Transport after more than 41 years of service.

Francois (Frank) Richards, who joined D.O.T. as a radio operator at Halifax in May 1926, was supervisor of the radio frequency and call sign assignment subsection of the Radio Regulations Division when he retired.

Mr. Richards worked as a radio operator for 11 years before he was transferred to Montreal. There he spent two years as an inspector of radio regulations, then spent the next 16 years as a radio technician working out of Montreal, a job which took him across most of eastern Canada from Montreal to the Maritimes and into the Arctic.

In 1955, he was appointed to headquarters where he has worked ever since.

And what are his plans for retirement?

"Oh, I think I'll go back to the Maritimes for a visit, take a trip to California, and then head back to Ottawa to look after my garden," said Mr. Richards.

Matthew Munro

Matthew Frank Turnbull ("Matt") Munro, a veteran of more than 30 years with the Steamship Inspection Branch of the Department, retired last Sept. 22 after a farewell presentation at headquarters.

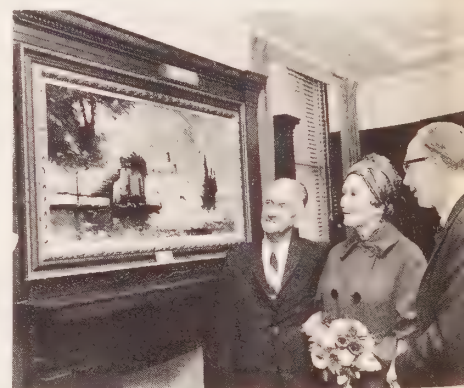
Mr. Munro, who started work in the government service as a steamship inspector at Saint John, N.B., was deputy chairman of the board of steamship inspection when he retired.

A painting, the going-away gift selected by his colleagues, was presented to Mr. Munro by Gordon W. Stead, assistant deputy minister, marine, who paid tribute to Mr. Munro's talent and ability during his lengthy career in Marine Services.

In accepting the painting, Mr. Munro said he suspected some "skulduggery" in its selection.

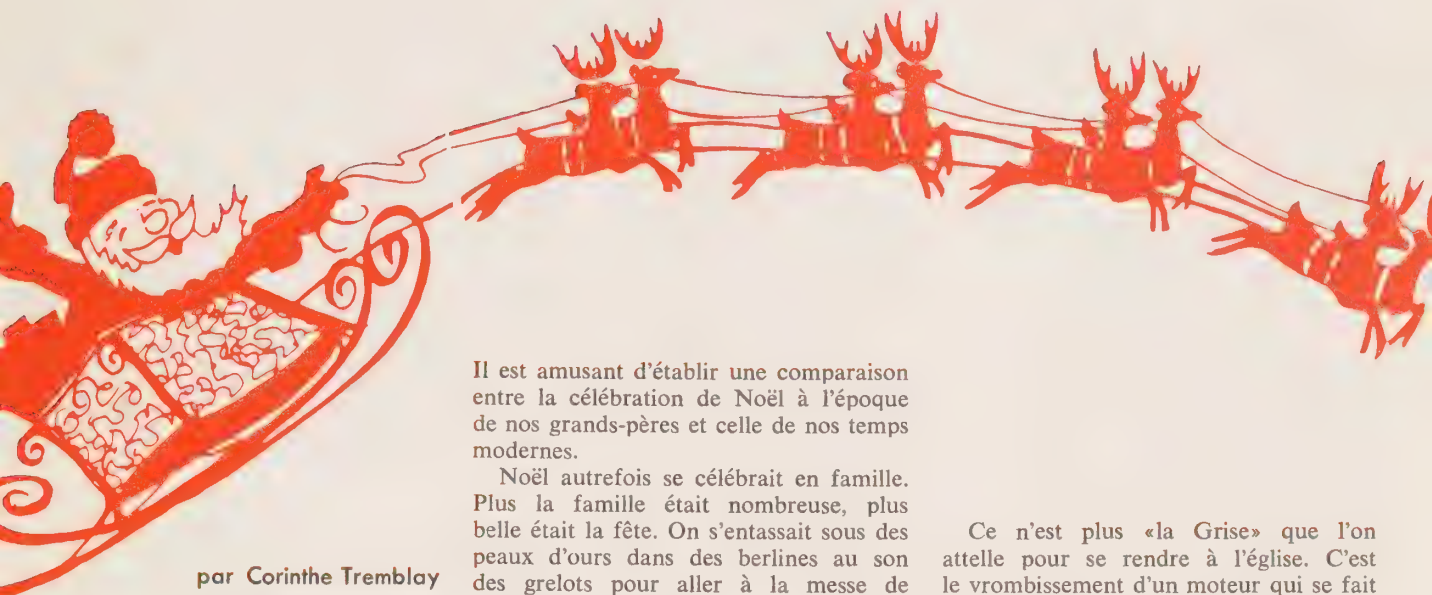
Later, the organizers of the farewell, H. O. Buchanan and J. H. Birtwhistle, admitted that they arranged to have the painting presented to Mr. Munro after learning from his wife that he had been admiring it recently in a downtown shop.

Following his last day of work in the Hunter Building, Mr. and Mrs. Munro completed arrangements to leave for Florida where they plan to begin their retirement leave.



Mr. and Mrs. Munro and Mr. Stead

NÖEL d'hier et d'aujourd'hui



par Corinthe Tremblay
des services de l'Air,
région de Montréal

Il est amusant d'établir une comparaison entre la célébration de Noël à l'époque de nos grands-pères et celle de nos temps modernes.

Noël autrefois se célébrait en famille. Plus la famille était nombreuse, plus belle était la fête. On s'entassait sous des peaux d'ours dans des berlines au son des grelots pour aller à la messe de minuit. Très gaiement on s'en retournait au bercail en chantant à tue-tête des Glorias qui se perdaient dans le vent. Si l'on manquait le clair de lune, l'obscurité, les rafales de l'hiver et même «la poudrerie» y faisaient des leurs. On a vu certaines carrioles et des traîneaux renversés par la tempête ou à cause des mauvais chemins, mais on n'y voyait pas une tragédie. Chacun se ramassait à qui mieux mieux, et le trajet se poursuivait en riant.

Après la messe, on se rendait à la maison paternelle pour le réveillon. La parenté franchissait des milles pour cette célébration. En arrivant, on y trouvait un beau sapin vert dégageant la senteur de nos forêts et tout décoré de serpentins aux vives couleurs. Pommes et oranges suspendues à ses branches tournoyaient à la lueur des chandelles. On s'échangeait des cadeaux; on chantait; on dansait jusqu'au matin sur des airs d'accordéon. Les plus favorisés avaient un «violoneux» battant la mesure avec ses talons. A table, on faisait honneur aux tourtières, aux cretons, au fromage de tête, aux beignes et aux pâtisseries de toutes sortes.

Aujourd'hui, nous sommes au siècle de la vitesse. Noël se fête de moins en moins à la maison. La vie de famille semble disparaître graduellement. Chacun va de son côté.

Ce n'est plus «la Grise» que l'on attelle pour se rendre à l'église. C'est le vrombissement d'un moteur qui se fait entendre et l'on prend place dans un chic véhicule des temps modernes. C'est à toute vitesse que l'on se rend à l'église. On se hâte sans trop savoir pourquoi. Le bon vieux «Père Noël» lui-même semble aussi hâter le pas. Il nous arrive plus souvent en hélicoptère. Ses rennes n'ont plus leur place en ce siècle de la vitesse.

Aujourd'hui, il est rare que l'on serve la réveillon à la maison. On organisera plutôt un dîner de famille réduite... On s'échangera aussi de riches cadeaux devant un arbre artificiel blanc, argent ou doré, parsemé d'ampoules colorées. On ne veut plus du beau sapin de chez-nous; il salirait les tapis. A ces repas, on servira des mets exotiques arrosés de vins importés, et les gourmets s'en gaveront. Ce ne sera jamais plus le réveillon de Noël où l'on ingurgitait pour se réchauffer un bon «caribou» ou encore le fameux vin de cassis fait à la maison.

Dans ce tourbillon des temps modernes, y retrouvons-nous vraiment ces heures romantiques des Noëls d'autan? Allons, ne nous laissons pas aller à la nostalgie! Rien ne sert de rêver, car enfin, ces gens étaient-ils plus heureux que nous? Essayons d'apprécier davantage et dans toute sa valeur l'ère du progrès.

En résumé, vivons joyeusement notre siècle et célébrons avec enthousiasme Noël d'aujourd'hui.

CROSS CANADA DATELINE

Ships' Officers Cited For Weather Reporting

Toronto—Officers and men from six Canadian Coast Guard ships were among those of 36 merchant and government ships who have received a total of 59 awards from the Department of Transport for excellence in voluntarily making marine observations for the Meteorological Branch during 1966.

The awards, which take the form of books of general interest, are presented annually to deck officers and radio officers whose work in making and transmitting weather observations attained an exceptionally high standard of quality and quantity.

Four ships' radio operators, including E. R. Bonneau of CCGS *D'Iberville*, S. A. Greer of CCGS *Labrador*, N. T. Kristensen of CCGS *John A. Macdonald*, and W. W. Schulz of CCGS *Camsell*, received copies of the book "From Semaphore to Satellite" for transmitting the greatest number of voluntary reports during the year.

Among those presented with awards for individual reporting was Desmond Daly of St. John's, Nfld., a deck officer aboard CCGS *Sir Humphrey Gilbert*, who was one of 15 deck officers to receive a copy of "Birds of Canada" by W. Earl Godfrey.

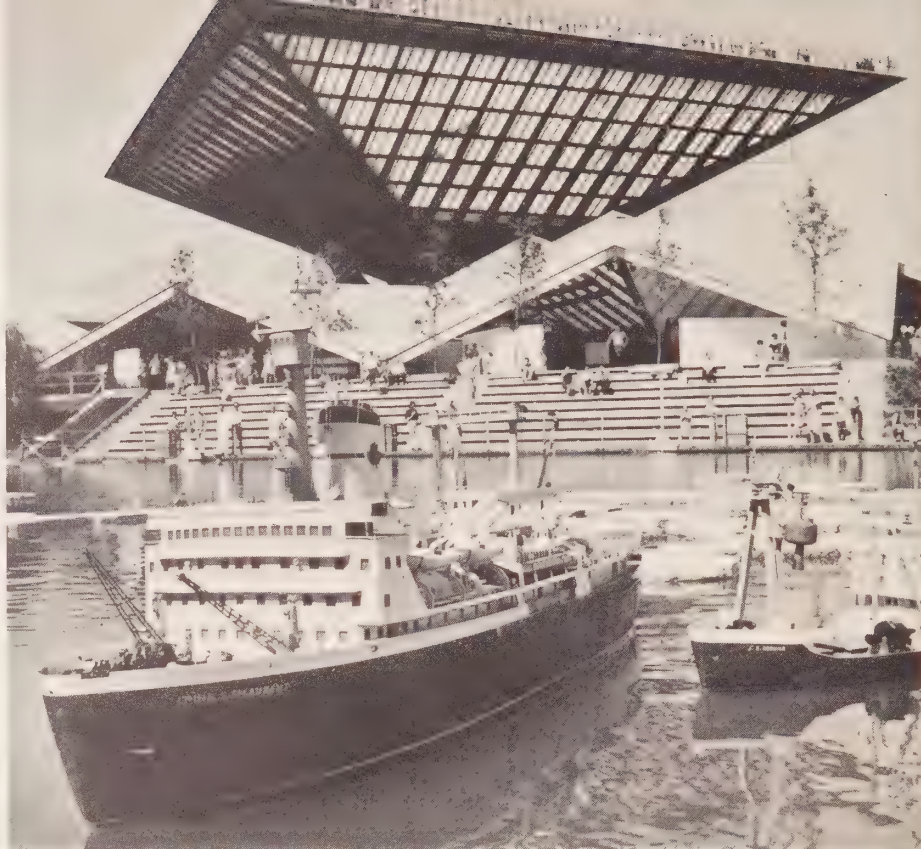
Cited as a group for their work were the officers and men of CCGS *Narwhal*, among those ships operating out of eastern Canadian ports who contributed to the voluntary observations.

The ship was awarded a copy of "Patterns of Canada," edited by W. J. McGill.

Aside from a few stationary weather ships posted at strategic locations, the merchant ships of the world are the principal source of information on the weather over the oceans, said J. H. R. Noble, director of the Met. Branch, who announced the awards.

About 4,000 ships belonging to some 35 different nations send reports as often as four times a day by radio to the meteorological service of the nearest country, he said.

In 1966, Canadian ships made about 45,000 reports, used by meteorologists to prepare their daily forecasts.



Two of the Department of Transport's remote-controlled ship models at Expo 67 took time out to pose for the photographer just before the big show closed late in October. The ships, models of CCGS Louis S. St-Laurent, which was launched last December, and CCGS J. E. Bernier, which was launched early this spring, have been turned over to the National Museum of Science and Technology in Ottawa where they will be put on display after being checked over and housed in glass show-cases by their builder, master model maker Philippe Demeules of Sorel, Que.

Deux des modèles télécommandés du ministère des Transports ont pris le temps de poser pour le photographe avant leur dernier «spectacle» à l'Expo, en octobre dernier. Les navires, répliques du n.g.c.c. Louis S. St-Laurent, lancé en décembre dernier, et du n.g.c.c. J. E. Bernier, lancé au début du printemps, ont été une des grandes attractions de l'Expo. Le ministère se propose maintenant de confier les modèles au nouveau Musée de la science et de la technologie qui a ouvert ses portes à Ottawa en novembre dernier.

Man of the Month

Ottawa—A D.O.T. landscape architect has been named man of the month by the American Institute of Landscape Architects.

William P. Wetherell, officer-in-charge of properties, zoning and landscape planning with the Construction Engineering and Architectural Branch of the Department, won the honor for his work at Edmonton International Airport.

Mr. Wetherell is responsible for the determination of the extent of land to be acquired for airport construction purposes, initiates airport zoning requirements and also plans and implements landscape projects for the Department's new air terminal buildings across Canada.



W. P. Wetherell

Radio Operator Doubles as Spare-Time Newsman

Brochet, Manitoba—What do radio operators—especially those serving in remote outposts—do with their spare time?

Ken Slyziuk, who graduated from the Air Services Training School in Ottawa last May and was posted to the radio-meteorological station here, started a small weekly newspaper in this northern Manitoba village.

Ken said he found that life can get "quite boring with nothing to do" once an operator completes his shift and most of the boys turn to their hobbies to keep themselves busy.

"I have done some writing in my life and I was asked to provide a small paper for the village people," Ken said in a letter to "The DOT" in which he enclosed a copy of "The Brochet Weekly Tribune."

The result of his off-duty efforts is a six-page carbon-copied potpourri of news, local events and sports that reads with the lively flavor of Canada's north-land and sells for just 10 cents.

Capt. Graves Promoted

Ottawa—Captain George Graves has assumed his new appointment as chief of Marine Services' Nautical and Pilotage Division.

Capt. Graves, formerly executive assistant to Gordon W. Stead, Assistant Deputy Minister, Marine, takes over from Captain Fred S. Slocombe who recently retired after more than 30 years' service with the Department.

A mariner since his boyhood days, Capt. Graves is a native of Vancouver who initially trained for the merchant marine as a cadet aboard H.M.S. *Conway*, the British merchant navy training vessel at Liverpool, England.

After two years of training, he became a cadet aboard the Canadian Pacific "Empress" ships operating between Vancouver and the Orient.

Capt. Graves joined D.O.T. in 1955 as principal examiner of masters and mates and became superintendent of nautical regulations in 1959, a post he held until he was appointed executive assistant to Mr. Stead in July 1963.

Nouveau poste au capitaine Graves

Le capitaine George W. R. Graves, un vieux loup de mer dont la carrière a débuté dans les services de la marine marchande britannique alors qu'il était

encore adolescent, dirige depuis le mois d'août dernier la Division nautique et du pilotage du ministère des Transports. A ce poste, il a succédé au capitaine Fréd S. Slocombe, qui a pris sa retraite récemment après plus de 30 ans de service au ministère.

Né à Vancouver, le capitaine Graves, encore très jeune, s'inscrit à un cours d'élève-officier de la marine marchande britannique à Liverpool, en Angleterre. Après deux ans de formation, on le retrouve à bord des navires *Empress* du Pacifique-Canadien assurant le service entre Vancouver et les pays d'Orient.

Au cours du deuxième conflit mondial, il passe au service de la Réserve royale navale. Il termine son service militaire avec le rang de lieutenant commander.

En 1955, le ministère des Transports retient ses services à titre d'examineur principal des capitaines et des lieutenants, et, en 1959, il devient surintendant des règlements nautiques. Enfin, en 1963, il est nommé adjoint exécutif de M.

Gordon W. Stead, sous-ministre adjoint pour la Marine. Il occupait ce poste au moment de sa plus récente nomination.

Suggestions Win \$175 for Six D.O.T. Employees

Ottawa—A suggestion that a modification to a marine beacon transmitter would overcome a potential fault resulted in a \$50 award to L. C. Knight, an electronics technician here.

Among additional awards announced recently, five other Department of Transport employees won a total of \$125 for suggestions designed to improve work methods.

They included Miss D. M. Miller, a clerk at Edmonton, \$40; J. D. Gale, a firefighter at Stephenville, Nfld., \$30; R. C. Saunders, an electronics technician from Richmond, B.C., \$30; C. R. Cromwell, a radio operator at Schefferville, Que., \$15; and A. S. J. M. Clements, a communicator at Dorval, Que., \$10.



UNE TÂCHE AGRÉABLE—M. Jeffrey Ho, attaché à la bibliothèque du ministère des Transports, a pris cette photo au moment de l'ouverture officielle de la nouvelle Bibliothèque nationale, rue Wellington, à Ottawa. Le premier ministre Pearson venait tout juste de couper le traditionnel ruban à l'entrée de l'immeuble. Il est photographié en compagnie de l'ancien ministre des Transports, M. J. W. Pickersgill, et de M^{me} Ellen Fairclough, qui assumait le poste de Secrétaire d'État au moment où le projet de la nouvelle Bibliothèque nationale a été mis en œuvre.

A PLEASANT DUTY—Jeffrey Ho, a member of the library staff at D.O.T. headquarters, was on hand for the official opening of the new National Library building at Ottawa recently and took this picture of a smiling Prime Minister Pearson just after he cut the ribbon and declared the handsome new building open. Assisting the Prime Minister were former Transport Minister J. W. Pickersgill and Mrs. Ellen Fairclough, who was Secretary of State at the time plans for the library were initiated.

Canadian Coast Guard **ALBUM** de la Garde côtière



The CCGS *Montcalm* is a heavy icebreaker based at Quebec City which operates in the Gulf of St. Lawrence and St. Lawrence River during the winter, then takes part in the Department of Transport's annual northern supply operations during the summer months.

CCGS MONTCALM

LENGTH: 220 feet
BREADTH: 48 feet
DRAFT: 16 feet, four inches
POWER: Steam, 4,000 IHP
GROSS TONNAGE: 2,017 tons

Le n.g.c.c. *Montcalm* est un brise-glace lourd ayant son port d'attache à l'Agence de la marine de Québec. Durant les mois d'hiver, il s'adonne au déglacage dans le fleuve et le golfe Saint-Laurent. Au cours de l'été, il est affecté aux opérations de ravitaillement dans l'Arctique.

LE N.G.C.C. MONTCALM

LONGUEUR: 220 pieds
LARGEUR: 48 pieds
TIRANT D'EAU: 16 pieds, 4 pouces
PUISSANCE: vapeur, 4,000 cvi
JAUGE BRUTE: 2,017 tonneaux

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